RESIDREAM

DERMATOLOGY RESIDENTS EDUCATION AND MOTIVATION BULLETIN

Volume - 6 | Issue - 2 | Jan - Feb / 2020 | Page- 62

Editorial

Dear Residents,

Warm greetings!

Residream, being a part of National Resident Connect Committee, has successfully completed 7 years, with 6 volumes and multiple issues. This edition being the 2nd issue of the 6th volume, has been themed. Dermatology has evolved a lot in the past few decades, from being confined to table chair consultation, has now grown to involve day long procedures like hair transplantation. In this changing era of dermatology, it is important to maintain a good consultation-procedure balance. Given a right direction, at the beginning of their career, the residents can showcase and accomplish in plenty. To give an insight to the young brigade into the world of procedures, this issue has been themed as "PROCEDURAL DERMATOLOGY".

There are many respected teachers and residents who have been behind the success story of this newsletter. We at the editorial board, are immensely grateful to Dr P Narasimha Rao, Dr Umashankar Nagaraju and all present and past, respected executive committee members for encouraging us in every path, in all possible ways. It is a matter of delight, to have ever-helpful Dr. Isha Narang as Advisor. Any idea doesn't turn into reality over-night, it needs consistent hard-work and determination, this has been the journey of all of us at the editorial board, from the past one fruitful year. At this point of my journey in the Resident connect committee I remember the famous quote by American basketball player Micheal Jordan, "Talent wins games, but teamwork wins CHAMPIONSHIPS". This is accurate, with extremely talented residents by my side, my post of editor in chief of this newsletter has been plain sailing. It is a matter of absolute glee, to guide these residents, and to have got

Editorial

an opportunity to learn a lot in return. Hard work, talent, zeal, enthusiasm and prompt being the main dictum, with Dr Monalisa, Dr Farhat, Dr Kinnor, Dr Ashwini and Dr Ratnakar, representing north, east, north-east, south and west zones respectively.

This edition has seen a tremendous input from residents all over India, which is very evident from the thickness of this book!! To kick-start, we have an article highlighting the achievements of National Resident Connect Committee in the past 1 year. Want to know the Expert's Formula? In achieving procedural success, we have cracked it for you! With Dr. Rashmi Sarkar, Dr Madura C, Dr Jaishree Sharad, Dr. Avitus John Raakesh Prasad and Dr. Manas Chatterjee, guiding and inspiring all of us. Followed by a crisp article, to ignite, to initiate, the innovation engine in all of us by the person who is known for his creative and up-to minute thoughts, Dr Aseem Sharma. Through my lens and Memer's corner, is pristine and has been a crowd-puller in the last issue, is something to look forward to. Graffiti is brand new, and eye catcher in this issue. Want some quick review on procedures, refer to the Dermanotes. Interesting reports on various cases, which will help us to expand our horizon has been included. The voice of resident, to share their experiences, is a special add on. A set of grueling quiz to grind your grey matter is in this edition. We end our edition by publishing the winner entries of IADVL theme "FIGHT THE TOPICAL STEROID MISUSE" essay and poster competition. A special mention on the winsome cover page which speaks for itself, by adroit, Dr Kinnor Das. The popularity of Residream and Yuvaderma E-bulletin of various states, under National Resident Connect Committee, is shooting up with every new issue. The very talented, dedicated editorial board is already prepping up the next issue.

Till then,
Hope you have a great read!
We are looking forward to your contributions for the next issue.
Thanks & Cheers!

Dr. Preethi B Nayak
Editor-in-chief, Residream
Convener, National Resident Connect Committee, IADVL, 2019

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RESIDREAM

President's Preamble

Warm wishes from the President IADVL 2019.

It is wonderful to share my thoughts with you on this young dermatologist's forum of IADVL, the second bulletin of RESIDREAM of this year. I am delighted to know that the theme of this bulletin is "procedural dermatology".

Dear Residents,

With articles, case reports, cross-word puzzles, brain teasers and many more diverse sections it is going to be a wonderful compilation and I am very eager to have this copy in my hand. I am sure these academic articles and discussion this bulletin will be of great benefit, not only to residents but also to all our members. Lot of work goes into planning and compiling a news bulletin and I congratulate the team members, ably led by Dr Preethi B. Nayak, for this wonderful effort. I wish the IADVL RESIDREAM members all the best in their efforts to bring out a wonderful bulletin.

P. Narasimha Rao
President IADVL-2019

Honorary General Secretary Speaks

Namaste and New Year Greetings to you all!

I am glad that I am completing my two years term (2018 to 2019) serving you all as Honorary Secretary General, IADVL the third largest association of Dermatologists in the world. I hope I have done justice to the best of my ability during these two years amidst of huge workload and meeting endless deadlines.

IADVL Residents Welfare program, the Resident Connect was introduced in 2014 by then Secretary Dr Rashmi Sarkar. Pleasurable parts of my secretary ship is introducing YUVADERMA. YUVADERMA has been successful in 8 states so far. I am sure remaining states will initiate next year. YUVADERMA is a state committee for and by the state residents to promote resident activities both at state and zonal level and to put this under one umbrella of RESIDENT CONNECT.

Dear Residents,

It is indeed my pleasure to have Dr Kumari Monalisa, Dr Ratnakar Shukla, Dr Farhat Fatima, Dr Kinnor Das and Dr Ashwini Mahesh as members from north, west, east, north east and south respectively as members of Resident connect; Dr. Preethi Nayak who have proved her efficiency as convener and leadership, and Dr Isha Narang being an excellent advisor for the past fruitful year. All of them have done a marvelous job in carrying out their responsibilities efficiently. This is the dynamic team picked based on their efficiency and were capable of delivering the best to our residents.

Resident DREAM (Dermatology Resident Education & Motivation) is the novel newsletter designed for and by our beloved residents. This newsletter is the best platform for the residents to share their views on post-graduation curriculum, clinical case discussion, exchange of ideas to prepare them for life after residency. I am happy that this news letter also has the best essay and best poster on IADVL theme - 'Misuse of Topical Steroids' awarded after a competition held during last quarter, report on YUVADERMA, article on innovations in procedural dermatology and interview with few eminent dermatologists.

All of you, who are soon to complete 5 years of provisional membership and/or obtained a postgraduate (PG) degree/diploma in Dermatology and registered their PG qualification with the MCI/State Medical Council, are notified to become Life Members (LMs) at the earliest. It may be mentioned that Provisional Life Membership is granted for a period of 5 years only within which a PLM has to convert to LM, failing which he/she ceases to be a member of the association. Conversion from

Honorary General Secretary Speaks

PLM to LM is an easy process and can be done through the Online Membership Application System (OMAS) on the IADVL website (www.iadvl.org).Those PLMs, who have migrated to another state branch after post-graduation, can write to the Secretary of the parent State Branch (where their PLM is registered) for a No Objection Certificate (NOC) and, thereafter, apply for conversion from PLM to LM and State Branch transfer concurrently.

I also request all residents across the country to sign up at www.iadvl.org and gain access to online membership privileges.

I urge all residents to be active in this unique platform which takes you through memorable journey. I also urge all of you to attend Resident Connect session scheduled during DERMACON Pune in large numbers. I wish the Program a great success.

Although I am now signing off from the post of Hon Secretary General, my work for IADVL will continue and serve you all again.

Best wishes and looking forward to see you all emerge soon as successful dermatologists of India.

Long Live IADVL

Dr. Umashankar Nagaraju
Honorary Secretary General, IADVL-2019

Message from Advisor

Every new day is an opportunity, it is super exciting for most of us to see the start of a new decade. Many of us anticipate new changes and new opportunities in this decade. Changes in ourselves, the world and the change we might bring in the world.

Dear Residents,

I wonder about all the young residents who are brimming with enthusiasm and will be flourishing dermatologists by the end of this decade. There would be opportunities for your career and personal development. We, as a community of dermatologists are becoming more supportive of each other. IADVL resident connect 'community' is a start to support the long journey you are about to undertake. Utilizing most from the opportunities IADVL has to offer will not just support yourself but also the whole Indian dermatology community.

This year will be kickstarted by another edition of ResiDREAM which has a theme of 'Procedural dermatology'. The many procedures which dermatologists have undertaken under their wings have made dermatology such a unique specialty. There is also a growing interest in young dermatologist in getting more knowledge and experience in these procedures and I'm sure this edition will aid in this. Knowing the science and research behind every procedure you undertake would differentiate you from the others. This is the same difference that differentiates a scientist, an engineer and a mechanic. I hope you assimilate all the knowledge that comes your way, apply in a way that helps your patient and make room for innovation.

Wishing you good luck for a decade full of opportunities!

Dr. Isha Narang
Advisor, National Resident Connect Committee,
IADVL-2019

"Who seeks, and will not take, when once 'tis offer'd, Shall never find it more"
- William Shakespeare

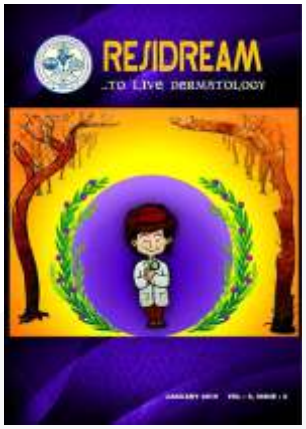
National Resident Connect Committee

The year 2019 started off as an eventful one for the National Resident Connect Committee with the launch of the newsletter residream and selection of the new National Resident Connect Committee.

The National Resident Connect Committee 2019:

- Dr. Umashankar Nagaraju - Chairperson
- Dr. Isha Narang - Advisor
- Dr. Preethi B Nayak - Convener
- Dr. Kumari Monalisa - Zonal coordinator (North)
- Dr. Ratnakar Shukla - Zonal coordinator (West)
- Dr. Ashwini R Mahesh - Zonal coordinator (South)
- Dr. Farhat Fatima - Zonal coordinator (East)
- Dr. Kinnor Das - Zonal coordinator (North-East)

JANUARY, 2019: The Residream newsletter (Vol : 5, Issue : 2) was launched at the inauguration



Resident connect session: A interactive session for residents was held at Dermacon International on topics ranging from experiences during residency by Dr. Saloni Katoch, importance of publications during residency Dr. Anupam Das to post residency fellowship and mentorship experiences by Dr. Amit Kerure and Dr. Surajit Gorai. The session was aimed at helping current residents navigate their way through residency and was a wonderful insight into life post residency.

FEBRUARY 2019: The National Resident Connect Committee 2019 was formed in February with previous year's convener Dr. Isha Narang as Advisor and Dr. Preethi B Nayak as the new convener. Five zonal coordinators were chosen from each zone to work together as a national team. Dr. Kumari Monalisa ,a 3rd year resident from Maulana Azad Medical College, New Delhi was chosen to represent the North, Dr. Ratnakar Shukla, a 3rd year resident from D Y Patil University- School of Medicine, Navi Mumbai represents the West, Dr. Ashwini R Mahesh, resident of GSL Medical College, Andhra Pradesh represents the South, Dr. Farhat Fatima, a 3rd year resident of Medical College, Kolkata represents the East and Dr. Kinnor Das, a 3rd year resident of Silchar Medical College, Assam represents the North-East .

AUGUST 2019: The Residream newsletter (Vol : 6, Issue : 1) was launched at Mid-Dermacon held in Pune. A nationwide essay and poster competition for residents was announced on the IADVL theme " fight the topical steroid misuse"

NOVEMBER 2019: Resident connect session : A very interesting debate session was held amongst residents at PIGMENTARYCON 2019, KOLKATA, with Dr. Rashmi Sarkar and Dr. Saloni Katoch as the judges and Dr. Preethi Nayak as the moderator. The topic was "Social and electronic media for dermatologists: boon or bane?"

JANUARY 2020: The latest edition of Residream newsletter (Vol : 6, Issue : 2) is set to be launched at DERMACON 2020, Pune. This main focus of this issue is "Procedural dermatology" with interviews from various stalwarts in this field and also articles from residents themselves. This issue is also special because it will feature the winning entries of the essays and posters on the IADVL THEME " FIGHT THE TOPICAL STEROID MISUSE".
A resident connect session is scheduled for residents and faculty members to interact and gain insight into experiences by experts like Dr. Manjunath Shenoy and Dr. Rashmi Sarkar. A panel discussion on procedural dermatology by Dr. B S Chandrasekhar, Dr. Satish Udhare, Dr. Somesh Gupta, Dr. Shyamanta Barua and Dr. Salim T and moderated by Dr. Preethi Nayak is scheduled for this session.

A big congratulations to our convener Dr. Preethi Nayak who is going to be awarded the Presidential Appreciation Award during IADVL Felicitation day, Dermacon 2020. The new initiative of 2019 was to start Yuvaderma in other states of India, as it was before in Delhi & Karnataka.

Yuvaderma

National Resident Connect Committee is doing its best to get all the states together, to strengthen the voice of residents, and create a platform to showcase their hidden talent via YUVADERMA.

KARNATAKA

The inception of Yuvaderma Karnataka team was by the then President and secretary of IADVL Karnataka Dr. Manjunath Shenoy and Dr. Shashikumar B M. Dr. Saloni Katoch was the 1st Editor-in-chief of the E-bulletin released in 2016. So far there have been 8 editions of the E-bulletin. The present team is led by Dr Kirti Katwe, with Dr. Preethi B. Nayak as advisor. The team has 6 associate editors, Dr. Gagana Gopal, Dr. Pranami Kashyap, Dr. Priyanka Karagaiah, Dr. Sanjay Tejaswi, Dr. Shilpitha Srinivas and Dr. Shibani Bhatia. Yuvaderma E-bulletin is a biannual magazine. Postgraduates from all over Karnataka are encouraged to contribute their articles which may include academic case reports, interesting articles, case series as well as non-academic articles like photography, poetry, paintings, sketches.

The team also carries out various competitions for residents under the leadership of IADVL KN secretary like Poster competition on Psoriasis day and Vitiligo day.

Resident session, an exclusive session for the residents was organised by the team during Cuticon Gadag 2019, it focused on topics of postgraduate interest. Talks on fellowships and observerships available in India and abroad were given.

DELHI

The first isuue was started in 2018 by Dr. Isha Narang as the convener and Dr. Tanvi Gupta as the editor-in-chief with Dr. Rashmi Sarkar as the President. The third issue of the Yuvaderma bulletin was released this year The present team is led by Dr. Rashmi Sarkar as the scientific advisor, Dr. Preethi B. Nayak as the convener, Dr. Prashansa Jaiswal as the editor-in-chief. There 5 associate editors, Dr. Archana J Lokhande, Dr. Rohini Soni, Dr. Soumya Sachdeva, Dr. Pankhuri Dudani and Dr. Meghna Gupta.

ANDHRA PRADESH

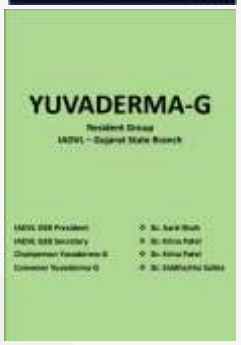
The first Yuvaderma newsletter was released in November during CUTICON. The team is led by Dr M. Srinivas Rao. The team has 5 associate editors, Dr. S. Dheeraj, Dr. S. Kusuma, Dr. S. Akshay Jain, Dr. Ch Sowjanya and Dr. U.V.S. Akhila. A 40 min session for Yuvaderma resident connect during Cuticon 2019 where all the opportunities to the residents by the IADVL were discussed by Dr. Seetharam sir. A whatsapp group for the residents of Andhra Pradesh was created. All the information regarding any CMEs, workshops, sig programs, notifications regarding scholarships, etc.are posted here. Daily one knowledge bite is posted in this group by professors. A website for the AP IADVL was created and a space for resident activities in the website was created.

NORTH-EAST STATES

The first volume of the Yuvaderma newsletter was released during CUTICON
The team is led by Dr. Indrani Dey as the chairperson and Dr. Dipak Kr Agarwalla as the convener. The team has 5 associate editors, Dr. Lily Singha, Dr. Hitesh Khatri, Dr. Ziaul Haque Ahmed, Dr. Bhavna Lochav and Dr. Linda Kongbam.

GUJARAT

The first Yuvaderma E-bulletin was unveiled at the state conference. The team is led by Dr. Krina Patel as the chairperson and Dr. Siddhartha Saikia as the convener, with contributions by residents, Dr. Srishti Jain, Dr. Jahnavi Sambangi, Dr. Khushboo Modasia, Dr. Shiva Prasad Gouda, Dr. Priya Agarwal and Dr. Asifa N.



MADHYA PRADESH

PGCON 2019 (west zone) was conducted by IADVL MP and was concluded with great success on July 13th and 14th 2019 under the great organising team lead by Dr. Narendra Gokhale, Dr. Deepak Mohana and Dr. Sanjeev Vaishampayan. 225 postgraduates from 42 medical colleges participated in this mega event.

Dr. Farhat Fatima
PG 3
Medical College,
Kolkata, West Bengal

Expert's Formula

Dr. Rashmi Sarkar

Dr. Rashmi Sarkar is a professor in Department of Dermatology at Maulana Azad Medical College, New Delhi. She was the past president IADVL, DSB (2018). She is also President of Pigmentary Disorders Society. Vice President, International Society of Dermatology & Chair, International Mentorship Committee. Council member, Asian Society for Pigment Cell Research (ASPCR), Chairperson, Women's committee, International Federation of Pigment Cell Societies. Editor-in chief, Pigment International. She has multiple national & international publications.

KM: List of basic instruments one has to buy before starting a basic dermatosurgery setup in practice.

Dr. Sarkar: I think you should have the basic things like instruments for skin biopsy, excision and suturing, comedone extractor. In case you have interest in vitiligo surgery, you can also have the basic things for split thickness skin grafting. Then instruments like electrocautery and chemical peels. Its only later, when you think of getting hyfrecator, cryotherapy, one basic laser, may be one diode LASER would be good.

KM: According to you how one should differentiate between ethical and non- ethical? How and where to draw the line?

Dr. Sarkar: Any dermatosurgical procedure that we are doing as a treatment for a disease or to improve one's cosmetic appearance where it is significantly impairing the quality of life of the patient. These are few things that we can definitely say, are ethical. But sometimes, patients come and say that he wants so and so treatment and you know that it's not really required. It is where you draw the line between ethical and non ethical.

KM: Precautions while doing and post procedure in a retroviral patient.

Dr. Sarkar: I think all the standard Universal Precautions should be followed. All the instruments and fluids should be properly taken care of. In case of needle prick injury, all the necessary post exposure prophylaxis along with required blood investigations should be carried out.

KM: How important is it for a resident to attend workshops in conferences?

Dr. Sarkar: I think you have to decide first, whether are you really inclined towards dermatosurgery or not. Even if you are not, there are few basic procedures that you have to do which are generally taught in the medical colleges itself. But if you want to do something more like a vitiligo surgery, nail surgery, or some of the cosmetic procedures, then i think it becomes very necessary to attend workshops.

KM: What is better according to your experience, for facial melanosis? Chemical peels or Laser? Any special precaution that must be undertaken in perspective of Indian skin?

Dr. Sarkar: I think that has to be individualised. Remember that the most important thing is to start with topicals or an oral treatment. 2nd line will be any kind of procedure.

Chemical peels will always would have an edge over LASERS, as LASERS requires a lot of caution in dark skinned patients and may have a lot of complications.

Priming is very important while doing a chemical peel whether you do with a hydroquinone or tretinoin. And, sometimes when you are not sure, it's better to under peel than to over peel.

KM: What is your preferred procedure in the following?

1. Nevus of Ota

   Dr. Sarkar: Q switched NdYag

2. Viral warts in immunocompromised patient

   Dr. Sarkar: Just be extracareful, removal in multiple sittings via electrical or chemical cauterisation can be tried. Besides that, we can also add some immunomodulators like zinc or levamisole.

3. Multiple molluscum contagiosum in a child

   Dr. Sarkar: 10-20% KOH pricks.

4. Melasma

   Dr. Sarkar: Sunscreen & topicals for 6-8weeks followed by peels like glycolic acid/ mandelic acid peels. LASER is only when, it's a dermal melasma.

5. Lichen planus pigmentosus

   Dr. Sarkar: General advice like avoidance of mustard oil/ amla oil or soaps. Then, triple combination therapy or tacrolimus, followed by Dapsone or Isotretinoin. Colchicine and cyclosporine, we keep for reserve. Chemical peeling particularly phenol peels when the active part is over.

KM: Your take on:

1. PRP in hair loss

   Dr. Sarkar: PRP is something, which doesn't have much evidence. But PRP is definitely a treatment which must be kept in armenatarium. So, there is no harm in doing it, when other modalities have failed.

2. LLLT- a social media craze or potential outcomes

   Dr. Sarkar: Nowadays people think, if nothing is working, LASER is a universal thing. People need to be educated that it is to be given right at the end & it only has some specific indications.

3. Ultrasound in dermatology

   Dr. Sarkar: It is very important in evaluating certain diseases pre and post therapy & collagen vascular disease. Not only diagnostic but also it may have some therapeutic implications in pigmentary disorders. It might have some role in inducing deep dermal collagen, although the exact mechanism is not known

KM: Need of an anesthesiologist during dermatology procedure.

Dr. Sarkar: As a dermatologist, dermatosurgery came quite late. We have certainly borrowed certain things from a plastic surgeon. I think, while doing procedures for some extensive lesions or when the patients is little apprehensive, an anaesthetic can be there on call.

KM: Importance of dermatology ICU.

Dr. Sarkar: There is an importance of ICU in some of emergency cases like Toxic epidermal necrolysis, severe cases of pemphigus, eryhthroderma etc. These conditions need barier nursing and may have systemic complications and sometimes we are also not trained enough for few of the medical management, in that case a small dermatological ICU may be helpful.

KM: Please advice for our budding dermatologists about how to gain and improve our skills in procedural dermatology?

Dr. Sarkar: First is reading and observation. Attend workshops, or when you are pass out, you can attend some of these procedures in some of the practitioner clinic. Learning never ends. Even at our age, we actually go and stand with the rest of the crowd to watch and learn. You can also watch some of the youtube videos. And always start initially doing with experienced personnel and later on you can have your own practice.

KM: Where do you see procedural dermatology in the coming 10 years? Any suggestions, you would like to give for its better learning and advancement in India.

Dr. Sarkar: I think it is going to stay. To be good in procedural dermatology, you need to have a good hand, a good eye & a good team. At the same time, we cannot exchange, medical dermatology with procedural dermatology. For surgical dermatology, believe me, we have got the best surgical dermatologist in India. Abroad, if you have to learn, the non surgical procedures are better done there. I think any place, which is giving you hands-on is the place, where you can actually do it.

KM: How much time one needs after MD to be an experienced in dermatosurgery?

Dr. Sarkar: I think it never ends. Some of the institute like St. Johns & CMC, Vellore has a formal 1 year dermatosurgery course. IADVL have also taken some of tie-ups with DNB and some fellowships are being offered both in Dermatosurgery & Dermatopathology. But anyhow, if you are learning under someone, and then may be of two or three years of experience,

but it actually comes up with the number of years you have put in, practising on your skills

KM: Most of the residency programs are only about clinical dermatology, how to be good in Aesthetic, Cosmetic & Procedural dermatology part?

Dr. Sarkar: As I already told, keep observing, attend workshops, watch you tube videos and all. IADVL also has excellent Observership programs in Dermatosurgery & Procedural Dermatology in India itself.

KM: How to balance consultation of patient & doing procedure in one's practice?

Dr. Sarkar: You have to divide your time depending on your interest. I think a 70% for consultation and 30% for procedural part would be good. But if you are more of a procedure oriented person, then it could also be 60:40. But a consultation below 40% is not acceptable

KM: In most of private setup, only nursing staff or untrained person and not the Dr. himself or herself do most of the procedures, your take on this. Is it to be allowed?

Dr. Sarkar: It's a difficult question. It's done abroad also. But actually u need to be careful as you are allowing them to do at your own risk. Better would be to keep some fresh passouts, who have done their postgraduations in dermatology for assistance.

KM: Suggestion, advices for younger dermatologist/ residents who to make their career in procedure dermatology.

Dr. Sarkar: Read & Observe...Be humble, not only for learning but also because anytime complications can occur and you need to do a lot of hand holding with the patient. Remember that in dermatology, we have many options that if you are not good in one thing, you can always fall back to your medical dermatology.

Thank you for Ma'am, for your time. It was truly an endeavouring experience

Dr. Kumari Monalisa
PG 3,
Maulana Azad Medical College,
New Delhi

Memers Corner

DR. MANESHA SINGH
PG 1
SILCHAR MEDICAL COLLEGE
ASSAM

Expert's Formula

Dr. Madura C

Dr. Madura C. *is Chief Dermatosurgery & Hair Transplant Surgeon at CUTIS Academy of Cutaneous Sciences, Bangalore. She completed her MBBS from VIMS, Bellary and MD in Dermatology from JNMC, Belgaum, Karnataka. She later persued FRGUHS (Dermatosurgery) from Bangalore Medical College & Research Institute, Bangalore. Dr. Madura C has ample of publications in various journals and has contributed to a chapter in Handbook of dermatologic drug therapy, text book of lasers and hair transplantation. She has delivered talks at the state as well as the national forum. She is a member of SIG – trichology, focus group – hair transplantation, IADVL. Dr. Madura was also involved in WOCOD 2017 Organizing committee. Her areas of interest include hair transplantation, Scar revisions and laser medicine.*

KD: What are the basic instruments one has to buy before starting a basic dermatosurgery setup in practice?

Dr. Madura: The basic instruments includes, right from comedone extractors to graft harvesting knife. You need instruments for excisional surgeries, acne scar surgery and vitiligo surgery.Excision trolley must include BP handle- 3 and 4, Adson toothed and non-tooothed forceps, Iris scissors, Skin hook (single and double prong), Dressing scissors, Needle holder , towel clip, and sponge holding forceps.

Acne scar surgery trolley- Apart from excision instruments, it includes varied sized punches, Castrovejo scissors, Jeweller's forceps and nokar needle.

Vitiligo surgery instruments include manual Punches, Dermabrader (diamond), micro motor with power punches, Graft harvesting silvers knife with Castrovejo scissors and Jeweller's forceps.

KD: According to you how one should differentiate between ethical and non- ethical? How and where to draw the line?

Dr. Madura: According to me unethical is doing any intervention which is not indicated when you know it wont benefit the patient and can risk the patient financially with out desired benefits. These incllude doing wrong unindicated treatment or surgery, unnecessary investigations, doing surgery without absolute training, not following the norms of surgery, charging exuberantly, unnecessary referral of patient to other centres especially in view of commission and cut business for referrals. In view with hair transplantation, doctors job being done by technicians will become more unethical. Now you will know when and where to draw a line.

KD: Precautions while doing and post procedure in a retroviral patient?

Dr. Madura: Follow the universal precautions with head to toe protection gears. Post-procedure do not differ in anyway.

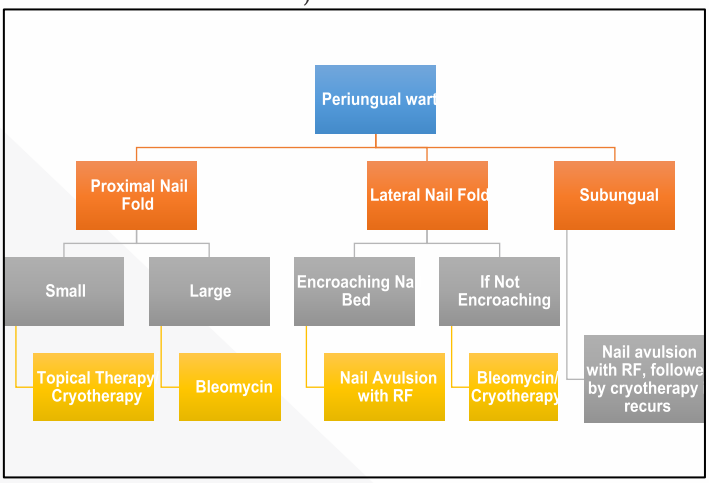
KD: How important is it for a resident to attend workshops in conferences?

Dr. Madura: The workshops are designed basically to sensitise the residents and beginners in that field.

The resident will come to know the bird's view on the subject. It helps the already interested and motivated resident to do small procedures more skillfully and methodically. The workshops creates intrest in a particular field where residents can groom themselves. The procedures on sebaceous cyst, lipoma, acne scar surgeries and basic vitiligo surgery can be done in opd with minimal learning curve under staff guidance initially. Workshops helps to identify the mentor to enhance our skill further.

KD: For periungual wart or any other recalcitrant wart. How do you generally go with different modalities of treatment?

Dr. Madura: If single wart I follow the below regimen. If multiple I prefer bleomycin intralesional injection



KD: What is better according to your experience, for facial melanosis. Chemical peels or Laser? Any special precaution that must be undertaken in relation to Indian skin perspective?

Dr. Madura: Facial melanosis is broad terminology, the conditions amenable for these therapies are toxic melanosis, lichen planus pigmentoses, PIH and melasma. Selecting modality depends on level of pigmentation. In melasma- chemical peels/ low fluence laser toning. In LPP 1064 Qs Nd YAG/pico laser. In toxic melanosis and PIH prefer chemical peels.

KD: What is your preferred procedure in the following?

- Nevus of Ota-**Dr. Madura** 1064 QS Nd-YAG laser
- Viral warts in immunocompromised patient - **Dr. Madura** cryotherapy
- Multiple molluscum contagiosum in a child-**Dr. Madura** Extraction under GA or topical 20 % KOH with Vaseline as protective ring
- Melasma- **Dr. Madura** Q switched Nd yag 1064nm, low fluence toning
- Lichen planus pigmentosus- **Dr. Madura** Fractional lasers + 1064 Qs Nd YAG laser

KD: Your take on-

a- PRP in hair loss.- Dr. Madura: More patient satisfaction than efficacy, it needs maintenance session

b- Bio fillers- Dr. Madura: Economical, interesting, it's working for me yet to know the longevity

c- LLLT- Dr. Madura: a social media craze or potential outcomes- Recent medical literature are showing evidence of efficacy.

d- Ultrasound in dermatology- Dr. Madura: Currently we use to diagnose the plane of swelling and Doppler USG helps evaluation of varicose veins. This innovative challenging field has new area of focus on to know the depth of tumors.

KD: Need of an anesthesiologist during dermatology procedure?

Dr. Madura: Anaesthesiologist is needed during surgeries like Hair Transplantation, liposuction, and also short GA for procedural intervention in kids.

KD: Tips on doing nerve biopsy?

Dr. Madura:

- Select proper sensory nerve
- Know anatomy of nerve to be biopsied
- Nerve is identified by its creamy colour
- It does not move with movements unlike tendons
- Always put stay sutures on either side of segment to be biopsied
- Transfer media is normal saline

KD: Tips on intraoral biopsy?

Dr. Madura:

- Intraoral biopsy do not need betadine paint, instead do betadine oral rinse
- Stabilize the tissue with chalazion clamp
- Give Adequate anesthesia with adrenaline and wait for minimum 15 minutes before you start the procedure

- Stay stitch can be put first and later closed after biopsy to make it easy to perform biopsy and for better hemostasis
- Use catgut/ vicryl in single layer closure

KD: Importance of Dermatology ICU?

Dr. Madura:

- Its evolving and is required nowadays
- As we see lot of dermatological emergencies and also to manage dermatosurgical /procedural emergencies

KD: Please advice for our budding dermatologists about how to gain and improve our skills in procedural dermatology?

Dr. Madura:

- Meticulous step-wise learning
- Identify a mentor/institute to get groomed (fellowship courses)
- Attend workshops
- Acquire or refine your skills by Specific short fellowship programme in certain procedure eg. Hair Transplantation/ injectables

KD: Where do you see procedural dermatology in the coming 10 years? Any suggestions, you would like to give for its better learning and advancement in India.

Dr. Madura: Procedural dermatology has great future, But it may slip into the hands of quacks and other specialists and technicians if budding dermatologists do not practice. Hence procedural dermatology fellowship must not be done for degree sake, the residents who take up the subspecialty must practice and grow it further.

KD: How much time one needs after MD to be an experience in dermatosurgery?

Dr. Madura: The minimal training period Is 1 year. It needs 1- 3 years of time to become well experienced dermatosurgeon depending on case exposure.

KD: Most of the residency program only about clinical dermatology, how to be good in Aesthetic, cosmetic & procedural dermatology part?

Dr. Madura: Yo u can do specific Fellowship programms of 1 year on medical cosmetology or dermatosurgery at various centers. A 1 month observership program by IADVL at recognised centers. Also there are recognised specific training centres (national and international) where you can have one to one interactive learning with an expert.

KD: How to balance consultation of patient & doing procedure in one's practice?

Dr. Madura: We need to have separate timings for consultation and procedures. The surgeries must be elective and planned. You can have a assisting doctor to join hands once the practice builds.

KD: In most of private setup, only nursing staff or untrained person and not the Dr. himself or herself do most of the procedures, your take on this. Is it to be allowed?

Dr. Madura: For certain procedures- yes well-trained technical and nursing staff are allowed to do the procedures under doctors monitoring like laser hair removal, chemical peels, PRP preparation ,laser toning and graft handling and implantation in hair transplantation surgery. But those procedures which require skill and dynamic judgement like fractional/ablative carbondioxide laser, tattoo removal, any injections doctor has to do.

KD: Tips for new dermatologist to avoid legal problem after dermatology procedure?

Dr. Madura:

- Know your basics
- Stick to principles and SOPS
- Have a mentor to guide
- Have indemnity insurance
- Consent and photodocumentation are important
- A good rapport with patient is what is required at the end.

KD: Suggestion, advices for younger dermatologist/residents who to make their career in procedure dermatology.

Dr. Madura:

- Be focused and Be patience
- Follow the motto of "DO NO HARM"
- Have an open analytical mind
- Do not underestimate anything or anyone, everyone has something which can be learnt

- Respect place, person and time
- Accept failure, quickly correct them, rebounce and reciprocate swiftly
- Be wise, learn from others mistakes
- Don't sell procedural dermatology let patient earn it.
- Don't be too commercial, commerce always follow science.
- You must become a seed which spurts open to grow everywhere it falls. Keep spreading the knowledge of procedural dermatology to your juniors and fellow colleagues.

Thank you for Ma'am, for your time. It was truly an endeavouring experience

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Expert's Formula

Dr. Jaishree Sharad

Dr. Jaishree Sharad is one of the International mentors in American Society of Dermatologic Surgery. She is also in the Board of Directors, International Society of Aesthetic and Dermatologic Surgery. Medical Director, Skinfiniti Aesthetic & Laser Clinic, Mumbai. Editor in Chief, Aesthetic Dermatology, Current Perspectives (Jaypee Medical Publishers). Author, Skin Talks (Penguin Random House Publishers). Author, Skin Rules (Penguin Random House Publisher)

RS: List of basic instruments one has to buy before starting a basic dermatosurgery setup in practice.

Dr. Sharad: The basic things that one needs to buy would be: A radio frequency cutting device such as the elman radiofrequency equipment, a microdermabrasion device basic peels, instruments like a comedone extractor, fine scissors, tooth and plain forceps, artery forceps, blade holder, needle holder. A hair removal laser and a laser for pigmentation either Q switched Nd Yag or PICOLASER come very handy.

RS: According to you how one should differentiate between ethical and non- ethical? How and where to draw the line?

Dr. Sharad: Ethical practice involves treating the skin condition or taking care of the patient's concern. For example, if a patient comes to you for tinea infection, treat it rather than advising fillers for tear trough. Do not suggest a list of aesthetic procedures just to get back your returns. Even if you have a hammer, everything should not look like a nail. Avoid advising list of unnecessary investigations.

RS: Precautions while doing and post procedure in a retroviral patient.

Dr. Sharad: Protective barriers such as gloves, gowns, masks, and protective eyewear are a must. Take care to prevent injuries when using needles, scalpels, and other sharp instruments or devices; when handling sharp instruments after procedures; when cleaning used instruments; and when disposing of used needles. Do not recap used needles by hand; do not remove used needles from disposable syringes by hand; and do not bend, break, or otherwise manipulate used needles by hand. Place used disposable syringes and needles, scalpel blades, and other sharp items in puncture-resistant containers for disposal. Locate the puncture-resistant containers as close to the use area as is practical. Immediately and thoroughly wash hands and other skin surfaces that are contaminated with blood, body fluids containing visible blood, or other body fluids to which universal precautions apply.

Waste has to be disposed in sealed yellow bags and given to the biowaste management. Always make sure you use smoke evacuators while performing lasers or cautery.

RS: How important is it for a resident to attend workshops in conferences?

Dr. Sharad: It's very important for residents to attend workshops and conferences because they get to learn a lot more in detail about a particular treatment. You get a lot of pearls and take-home messages. Besides you keep yourselves abreast with the latest.

RS: Do you see a huge gap in young residents and experienced practicing dermatologist? What changes will you suggest in course to bring those gaps to minimum?

Dr. Sharad: To include aesthetic dermatology in the core curriculum.

RS: For periungual wart or any other recalcitrant wart. How do you generally go with different modalities of treatment?

Dr. Sharad: Freezing with liquid nitrogen cryotherapy. Repeat a couple of sessions if it's recalcitrant and in case of periungual, I will also remove the entire nail and then do the liquid nitrogen cryotherapy.

RS: What is better according to your experience, for facial melanosis? Chemical peels or Laser? Any special precautions that must be undertaken in relation to Indian skin perspective?

Dr. Sharad: Facial melanosis is a very broad term and it does not make sense, we have to first find out what is the cause for this hyperpigmentation on the face and then treat the cause accordingly. For example, if its post inflammatory hyperpigmentation, I would start with very mild peels just about 10-15% TCA and 20% glycolic acid peels at monthly intervals. In case of Riehls melanosis, I would probably do a Q switch ND YAG laser. If its frictional melanosis then first ask the patient to avoid the causative agent causing friction and then do a combination of peels and LASER. It is really very important to understand the cause and then treat the cause. In Indian skin of course, it is extremely important to counsel our patients regarding sun protection.

RS: What is your preferred procedure in the following?

- Nevus of Ota
- Viral warts in immunocompromised patient.
- Multiple molluscum contagiosum in a child.
- Melasma.
- Lichen planus pigmentosus.

Dr. Sharad: For Nevus of Ota, I will use Q switch ND YAG laser. I am told that a PICO works better but I have no experience.

For viral warts I would do a liquid nitrogen cryotherapy in immunocompromised patients.

For multiple molluscum contagiosum in kids, liquid nitrogen cryotherapy.

For melasma I would just stick to medical treatments, rarely I would do the Cosmelan Peels.

For Lichen planus pigmentosus, I do a combination of the retinol peel and Q switch ND YAG laser- alternate them and I get fantastic results.

RS: Your take on-

a- PRP in hair loss.

b- Bio fillers

c- LLLT- a social media craze or potential outcomes.

d- LPP treatment with procedures.

e- Recalcitrant pemphigus plaque. How to treat?

f- Sclerotherapy in dermatology, conditions where you are using?

g- Ultrasound in dermatology.

h- Stem cell therapy.

Dr. Sharad:

a- PRP for hair loss acts as an adjuvant in case of chronic telogen and diffuse alopecia and just Grade I androgenetic alopecia.

b- Bio Fillers, I don't really believe in them and I prefer my Hyaluronic acid fillers.

c- Social media - it is fine to actually market yourself in social media and it is important in today's day and age. But there is a limit to it. I think ultimately your work speaks.

d- LPP: For Lichen planus pigmentosus, I do a combination of the retinol peel and Q switch ND YAG laser- alternate them and I get fantastic results.

e- Rituximab infusion in normal saline. Blood pressure, temperature, and pulse should be monitored during the first 30 min and half hourly thereafter till the infusion is done. Adjuvant therapy with cyclophosphamide, paracetamol, and hydrocortisone may be given. Topical tacrolimus helps too.

f- Sclerotherapy: I do not do

g- Ultrasounds in dermatology: It can be used to assess benign and malignant skin lesions in the epidermis, dermis, and subcutis, as well blood vessels close to the skin. A precise measurement of skin thickness and evaluation of internal skin structures can provide relevant insights related to the performance of surgical or nonsurgical procedures, therapeutic, cosmetic treatment, and patient's follow-up.

h- Stem cell therapy has a vast scope in clinical and aesthetic dermatology. Adipose derived stem cell will be the next big thing.

RS: How you convince patience about procedure?

Dr. Sharad: *I discuss the science and relevance behind a procedure and convince them accordingly.*

RS: Your take on pharmaceutical vs procedural dermatology.

Dr. Sharad: Both have their own place and both will act as adjuvants for each other.

RS: Need of an anesthesiologist during dermatology procedure.

I prefer local or tumescent anesthesia or nerve blocks which I do myself. I do not do surgeries which involve GA or spinal anesthesia

RS: Tips on doing nerve biopsy.

Dr. Sharad: I do not do

RS: Tips on intraoral biopsy.

Dr. Sharad: I do not do

RS: Tips for new dermatologist for avoiding legal problem after dermatology procedure.

Dr. Sharad: Informed consent, photographs before treatment, signature of patient on post procedure instruction sheet will help. Maintain ethics and privacy of patient. Have all treatment records written accurately and immediately after a procedure.

RS: Please advice for our budding dermatologists about how to gain and improve our skills in procedural dermatology?

Dr. Sharad: I think there are a lot of good fellowship centers both in India and abroad and you can attend these fellowships. They could be one month or even up to 2 years. You can also do an observership with senior dermatosurgeons. Make sure you attend a lot of hands on workshops at conferences. Reading peer reviewed papers will also help you to improve your skills in procedures of dermatology.

RS: Where do you see procedural dermatology in the coming 10 years? Any suggestions, you would like to give for its better learning and advancement in India.

Dr. Sharad: It is going to be very- very popular in the next 10 years and I think we should have more procedural dermatology even in the MD curriculum.

RS: How much time one needs after MD to be an experience in dermatosurgery?

Dr. Sharad: I think you should give about 6 months to yourself to train yourself in Aesthetic dermatology and dermatosurgery. However, there is no dearth of knowledge out there and no end to learning. We keep improving learning new techniques every single day.

RS: How to balance consultation of patient & doing procedure in one's practice?

Dr. Sharad: You can't have a busy OPD and do procedures at the same time. Schedule your appointments in such a way that you keep enough time for each procedure. Your staffs who are allotted the work of giving appointments should be efficient and well trained.

RS: In most of private setup, only nursing staff or untrained person and not the doctor himself or herself do most of the procedures, your take on this. Is it to be allowed?

Dr. Sharad: I do not have therapist in my clinic. I have doctors and para medical staff. The doctors do all the invasive and semi-invasive procedures. The nurses only do microdermabrasion, comedone extractions and oxygen facials.

RS: Suggestion, advices for younger dermatologist/ residents who to make their career in procedure dermatology.

Dr. Sharad: Stay focused, be honest, be passionate about what you do and do not forget your ethics and morale.

Thank you so much Ma'am for sharing your experience

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Expert's Formula

Dr. Avitus John Raakesh Prasad

***Dr. Avitus John** is a Dermatologist practising since Dec 2003, with a special interest in Laser based surgeries, Vitiligo surgeries and FUE Hair Transplantation. He is currently the Managing Director of S.P. Derma Center, Tamil Nadu where he has trained many dermatologists and plastic surgeons from India and abroad. He is the Author of the book Intense Pulsed Light - Applications in Dermatology and Aesthetic Medicine. He has authored chapters on dermatosurgery and Lasers in pigmented conditions. He has multiple publications in National Journals on dermatosurgery.*

AM: List of basic instruments one has to buy before starting a basic dermatosurgery setup in practice.

Dr. Prasad: Peel, Electrocautery, Microdermabrasion, Comedone extractor, various Forceps including toothed and 6.0 suture holding forceps, Smoke evacuator, Blade holder, Biopsy punches, Autoclave apparatus, bins, instruments tray, materials for sterilisation purposes.

AM: According to you how one should differentiate between ethical and non- ethical? How and where to draw the line?

Dr. Prasad: First do no harm. Ask yourself the question: Whether it will improve or correct the present condition. I usually ask myself whether I would do this procedure for my family member. If No, then I will not do.

AM: Precautions while doing and post procedure in a retroviral patient.

Dr. Prasad: Unless you are trained in handling the patient or have an OT equipped to handle retroviral patients, better not do.

AM: How important is it for a resident to attend workshops in conferences?

Dr. Prasad: Yes, Atleast the basic procedures and few lasers like Co2 Fractional, Qs Nd YAG, Hair removal laser.

AM: For periungual wart or any other recalcitrant wart. How do you generally go with different modalities of treatment?

Dr. Prasad: Intralesional MMR, Long - Pulsed Nd YAG 1064nm, adding oral Zinc, Vit C and Vit D3.

AM: What is better according to your experience, for facial melanosis? Chemical peels or Laser? Any special precaution that must be undertaken in relation to Indian skin perspective?

Dr. Prasad: Make a diagnosis of the cause and counsel. Medical management first. Newer peels are better at handling facial melanosis. QS Nd YAG with Carbon, PTP mode in Melasma, lower fluence with higher frequency is safer in dark skin.

AM: What is your preferred procedure in the following?-

1. Nevus of Ota

   Dr. Prasad: Nd YAG 1064nm and 532nm, Co2 fractional followed by Qs Nd YAG.

2. Viral warts in immunocompromised patient.

   Dr. Prasad: Cryotherapy, avoid electrocautery or ablative measures.

3. Multiple molluscum contagiosum in a child.

   Dr. Prasad: Retinoic acid spot application, new Tea tree oil-based creams, adding zinc and Vit D3.

4. Melasma.

   Dr. Prasad: Ferulic acid peel, Tixel open channel technique with Tranexamic acid application, Nd YAG in PTP mode.

5. Lichen planus pigmentosus.

   Dr. Prasad: Ferulic acid peel, Phenol based combo peel, Qs Nd YAG.

AM: Your take on-

1. PRP in hair loss.

   Dr. Prasad: Yes, as an adjuvant to existing treatments.

2. Bio fillers.

   Dr. Prasad: For immediate effect, no long-term benefits.

3. LLLT: a social media craze or potential outcomes

   Dr. Prasad: Needs to be continued till patient needs hair. Good improvement is noticed following hair transplant, improves the growth of implanted hair.

4. Ultrasound in dermatology.

   Dr. Prasad: B mode scans for academic purpose, assessment of scars.

AM: Need of an anaesthesiologist during dermatology procedure.

Dr. Prasad: Any procedure done under sedation or IV line, definitely yes.

AM: Tips on doing nerve biopsy.

Dr. Prasad: I am not experienced in nerve biopsy.

AM: Tips on intraoral biopsy.

Dr. Prasad: Local should be given preferably around the lesion to avoid distortion of the lesion. Stretching and if possible, push skin from cheek to create a summit inside the buccal cavity for better visualization of edges of lesion and to make incision easier. Avoid high suction tube while evacuating saliva to prevent dislodgement or tearing of the specimen.

AM: Importance of dermatology ICU.

Dr. Prasad: Possible in higher centre when treating skin failure cases like TEN, SJS, and Erythrokeratoderma.

AM: Please advise our budding dermatologists about how to gain and improve our skills in procedural dermatology?

Dr. Prasad: Attend workshops, get training with hands-on. Better to get trained in the procedures which they would employ in the starting of practice.

AM: Where do you see procedural dermatology in the coming 10 years? Any suggestions, you would like to give for its better learning and advancement in India.

Dr. Prasad: I feel procedural dermatology is at its highest now. The cost of procedures should be made affordable to all, as the number of Dermatologists doing procedures has increased and the patient pool is currently saturated to only those patients who can afford.

Innovation and modification of procedures should be attempted and shared in order to make it simple and tailored to Indian skin. Workshops could be conducted in National conference by inviting international faculty who are the best in a procedure.

AM: How much time one needs after MD to gain experience in dermatosurgery?

Dr. Prasad: A minimum of 15 days training in a centre with a high procedure turnover is required to get an idea, which could be implemented in a step by step process and one can improve skill from there on. The student could opt to learn only those procedures, which he/she wants to actually start with. Ideally 6 months is required to learn all procedures, but will they implement all procedures once they start on their own is a question. It's easy to forget, if a beginner wants to start practice much later after the training.

AM: Most of the residency program is only about clinical dermatology, how to be good in Aesthetic, cosmetic & procedural dermatology part?

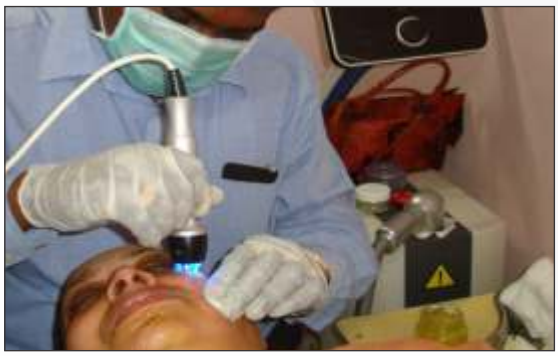
Dr. Prasad: There are many centres especially in Bengaluru, which give training program specifically in Aesthetic and Laser dermatology. If one could work under a Dermatologist in Aesthetic and lasers for atleast 6 months, that's the best training one could get.

AM: How to balance consultation of patient & doing procedure in one's practice?

Dr. Prasad: I prefer to give appointments for most procedures which would take more than 15 minutes. Procedures can be done between 1pm and 5pm when there are a smaller number of patients walking in for consultation. Once you are Atleast 5 years in to practice and procedure load is increasing, either you could employ another dermatologist to assist or few procedures can be done by trained nurses.

AM: In most of private setup, only nursing staff or untrained person and not the Dr. himself or herself do most of the procedures, your take on this. Is it to be allowed?

Dr. Prasad: It depends on how well trained the staff is. Trained staff can be helpful in parts of procedures, like preparing and dressing, leave on peels and masks, comedone extraction, phototherapy, handling non-invasive body



shaping devices. Any invasive and ablative procedures should be done by dermatologists only.

AM: Suggestion, advices for younger dermatologist / residents who want to make their career in procedure dermatology.

Dr. Prasad: Learn the basics of the procedure, understanding the parameters of any equipment are vital in performing the procedure correctly and optimally. Learn how to identify a complication early. Never do a procedure unless it's actually needed and employ the correct equipment for the condition, for example using electrocautery in tattoo removal is wrong.

Thank you very much sir for giving me an opportunity to interview you. It is always a delight talking to you sir. I continue to be impressed with your exemplary work sir.

Thank you so much sir for sharing your experience

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Expert's Formula

Dr. Manas Chatterjee

Lt Col (Dr). Manas Chatterjee *is currently a Professor and the Head at the Department of Dermatology, Institute of Naval Medicine INHS Asvini, Colaba, Mumbai. He has served as the President of the Association of Cutaneous Surgeons of India-ACS(I) from 2015-2017. He is the author of the book, ACS(I) PROCEDURAL DERMATOLOGY: A Step by Step Approach and PIGMENTARY DISORDERS: A Comprehensive Compendium. He has also edited several books on both clinical and procedural dermatology.*

FF: Sir can you give us a list of basic instruments one has to buy before starting a basic dermatosurgery setup in practice.

Dr. Chatterjee: Basic instruments before starting a basic dermatosurgery set-up would be as under:

Cheatle's forceps

Sponge holding forceps

Adson's tooth and non-toothed forceps

Jeweller's forceps

Mosquito artery forceps

Spencer's suture removal scissors

Bard-Parker BP handle No 3 for 15 blade; also 4 and 5

Surgical blades no 11 and 15

Disposable punches sizes 1.5 to 6 mm

Comedone extractor

Curette 3 and 4 mm diameter

5 inch blunt and sharp (Lister) scissors

Iris scissors

Castroviejo scissors

Skin hooks: single and double

Needle holder- Halsey and Box type

Nail splitter

FF: According to you how one should differentiate between ethical and non- ethical? How and where to draw the line?

Dr. Chatterjee: I think the difference would be if you would do the same for your family or relatives. If the answer to that question is yes, it would in most situations be ethical.

The other aspect is science. If it is good science, it would be ethical. If it is poor science, the procedure would in most situations be unethical.

FF: Sir, what should be the precautions while doing and post procedure in a retroviral patient.

Dr. Chatterjee: I do not differentiate between retroviral and non retroviral patients for procedure precautions and post procedure. Universal precautions are to be followed for all cases. The only thing I do for known retropositive patients is schedule them at the end so that I am sure that the instruments used would go straight to autoclave thereafter.

Post procedure instructions remain the same for all patients.

FF: How important is it for a resident to attend workshops in conferences?

Dr. Chatterjee: It depends on the level of knowledge that a resident has acquired in basic clinical dermatology before going in for attending workshops. I always suggest that residents should have a good grounding of clinical dermatology before going in for workshops. So, I suggest this for 2nd and 3rd year junior residents when they have adequate grounding of clinical dermatology and know what therapeutic modality to employ for various dermatoses, instead of blindly doing surgery, for example, for unstable vitiligo. Sometimes, what we discuss in workshops are meant for practitioners in addition to students and sometimes, comments made by faculty at workshops need to be put in perspective of sound clinical judgement, which comes out of some time spent in the department.

Having said that, it is good for those residents who are interested in procedural dermatology

and dermatosurgery, to attend workshops, especially if the faculty in their college are not dermatosurgically inclined, so that they are exposed to the myriad therapeutic benefits of this field of dermatology.

FF: How do you generally go with different modalities of treatment for periungual wart or any other recalcitrant wart?

Dr. Chatterjee: For recalcitrant warts, after I have exhausted repeated destructive therapeutic modalities, I normally use immunotherapeutic modality in the form of MMR vaccine or BCG vaccine. If the same is not successful, I treat with intralesional bleomycin.

FF: What is better according to your experience, for facial melanosis-chemical peels or laser? Any special precaution that must be undertaken in relation to Indian skin perspective?

Dr. Chatterjee: The therapeutic modality would depend on the cause of the facial melanosis. However, I am of the firm belief that medical modalities of therapy need to be completely exhausted before going for a procedural therapy in case of any facial melanosis. For example, in case of melasma, after treating medically, if response is inadequate, I would suggest chemical peels. Lasers are usually last line, with laser toning showing very modest results.

For conditions such as lichen planus pigmentosus, after the condition has been treated adequately medically and is inactive, peels before lasers is something I would always suggest.

For Q-switched Nd-Yag lasers, the quality of the machine also matters. So, if one has a machine which does not have the top-hat beam profile and the ability to deliver large spot sizes with adequate energy to treat dermal pigmentation, results would not be good, since dermal pigment is very common in Indian skin.

For Indian skin, one has to use conservative peel types and durations of exposure and for lasers, it is better to avoid 532 nm as far as possible and to again, use conservative settings with the lasers to start with. It is best to start with half to 2/3 of the presets that are given in lasers manufactured for Western skin.

FF: Sir, what is your preferred procedure in the following?

Nevus of Ota- **Dr. Chatterjee** : Q-switched Nd-Yag laser (no other option here) Viral warts in immuno - compromised patient- **Dr. Chatterjee :** No difference in treatment as compared to immunocompetent. However, I used oral retinoids in this group of patients more often.

Multiple molluscum contagiosum in a child-**Dr. Chatterjee :** I use 5-10% potassium hydroxide more often in children in case the wait and watch policy is not accepted or does not work or new lesions are developing.

Melasma - **Dr. Chatterjee :** Sunscreen, triple combination and tranexamic acid together to start with.

Lichen planus pigmentosus - **Dr. Chatterjee :** Sunscreen and tacrolimus with oral retinoids sometimes, depending on extent of lesions.

FF: Sir, your take on-

- PRP in hair loss: I feel that we still don't have data beyond some specific and most from India. In males, I don't think it works. In any case, the mechanics of this condition in males is pretty well defined. In women, due to the non-specific etiology, it is more often used and seems to show some benefit. However, the placebo effect is huge in this modality due to the fact that injections are being employed. I feel that the last word is yet to be said in this condition and till then, established modalities hold sway.
- Bio fillers: I don't think they work as well as they are touted to. Most of the effect is very temporary and again, the science is not too great here.
- LLLT- a social media craze or potential outcomes: LLLT has been shown to work but the wavelengths and fluences that have shown effect are not the same as those in some of the helmets available commercially here in India. A lot of the data are from trials that are company

sponsored and hence, we need for independent workers endorsing those results with their own work for us to be sure where we are headed here.

- Ultrasound in dermatology: I think this is going to be huge going forward. However, for that, we need higher resolution transducers in the range of 6-50 MHz than what we have presently.

FF: Sir, what is your take on the need of an anesthesiologist during dermatology procedure

Dr. Chatterjee: It is mostly not needed. However, for certain procedures such as in children where dissociative or general anaesthesia is needed, it is necessary. In adults, almost all procedures done by dermatologists can be done without need for an anaesthetist. However, an anaesthetist/critical care specialist can be kept on call if needed for those who do long duration procedures such as hair transplantation/liposuction etc. Also, it is best to bring an anaesthetist to the OT once in a while for suggestions on how to improve the OT environment in terms of sterility, critical care equipment, etc.

FF: Tips on doing nerve biopsy

Dr. Chatterjee: It is best to do it on sensory nerve. The sural nerve is the one most commonly chosen. However, if there is a thickened sensory nerve other that the sural nerve, that may be chosen. It is best to tie the proximal end and hold it, and then cut the distal end to prevent the nerve from slipping into the subcutaneous tissues.

FF: Tips on intraoral biopsy

Dr. Chatterjee: Put the needle through the two sides of the skin which is planned to be excised but not take the needle out from the other side, before applying the punch for excising the tissue.

FF: Sir, what do you think about the importance of dermatology ICU?

Dr. Chatterjee: It is most useful in those centres who deal with toxic epidermal necrolysis more than any other condition. It's importance is that TEN cases are treated a bit differently as compared to burns cases, though there is some similarity. For example, the fluid requirement is lesser than equivalent burns patient in terms of area of involvement. However, one needs to first get oneself as well as one's staff trained in basic critical care before embarking on establishing an ICU, since the Dermatology ICU would not be served as frequently by the Critical care specialist of the hospital, as is the general ICU or burns centre.

FF: Sir what is your advice for our budding dermatologists about how to gain and improve our skills in procedural dermatology?

Dr. Chatterjee: The most important thing is interest in this field of procedural dermatology. Once that is there or is kindled, the rest is easy. It is best to start doing small procedures during residency, after reading books such as the ACSI textbook of Dermatosurgery or the ACSI Procedural Dermatosurgery textbook or chapters on surgical dermatology in the IADVL Textbook of Dermatology. Thereafter, one must start with procedures on cosmetically less important areas and with procedures with less down-time and then go on to other procedures, which require more technical skill. The key is to keep doing procedures with sound knowledge of anatomy starting with small procedures and then going on to more complicated procedures as confidence grows. At some point, exchange with dermatosurgeons during conferences and workshops help improving confidence and skills.

FF: Where do you see procedural dermatology in the coming 10 years? Any suggestions, you would like to give for its better learning and advancement in India.

Dr. Chatterjee: Procedural dermatology has the ability to supplement medical dermatology in areas where adequate therapy cannot be provided by medical means. As times go on, the extent of use of procedures in dermatology practice is likely to increase and I expect, that in the next 10 years, 50% or more of an average dermatologist's work would involve procedures, and I am not talking of predominantly procedure oriented dermatologists' work here, but that of an average clinical dermatologist. I think, development of the primary skillsets of a surgeon in terms of basic knowledge of materials, anatomy, sterilisation and disinfection in addition to sound background of clinical dermatology would help the dermatologist

leapfrog to become effective dermatosurgeons and procedural dermatologists in our country. Also, the development of training centres which offer accredited surgical dermatology training would go a long way in advancing this field.

FF: How much time one needs after MD to be an experience in dermatosurgery?

Dr. Chatterjee: After MD, it takes an additional three years to develop the skillsets to be a well rounded dermatosurgeon. This time is needed to learn and perform the procedures in addition to learning the surgical ropes to be able to hold one's own in the operation theatre, and be at par with other surgical specialists.

FF: Most of the residency program is only about clinical dermatology, how to be good in aesthetic, cosmetic & procedural dermatology part?

Dr. Chatterjee: I feel that additional training after MD is a must to be able to develop into a skilled aesthetic/cosmetic/procedural dermatologist, in the area one is interested in. MD should be utilised in learning clinical dermatology, in which, there is too much to learn. A basic grounding of dermatosurgery and procedural dermatology may be given at this stage, but further knowledge and skill development should be left for a course thereafter. At present, Fellowships in dermatosurgery as well as aesthetic dermatology by universities are separately available after passing the basic speciality course. It is expected that soon, National Board of Examinations and MCI may progress to start Post Doctoral Certificate (PDC) courses and thereafter, Fellowships. Super-speciality degrees may be some time in coming.

FF: How to balance consultation of patient & doing procedure in one's practice?

Dr. Chatterjee: The performance of procedures should be an extension of the consultation in those patients who would do better with a procedure in addition to or in exclusion to medical prescription. It is best to designate a separate day for procedures when the clinic would be geared to procedure patients, especially in busy practices. In case one is not very busy, it may be better do perform the procedure at the same visit as the consultation to avoid a second visit by the patient.

FF: In most of private setup, only nursing staff or untrained person and not the doctor himself or herself do most of the procedures. Your take on this.

Dr. Chatterjee: Any procedure where skin penetration is involved should be performed by the doctor. In addition, any procedure where parameters need to be adjusted such as in lasers (with the possible exception of laser hair reduction where parameters, if set, may be repeatedly performed by nurses, especially in case of female nurses for private areas of women in case the doctor is male) should be performed by doctors. In case the dermatologist is busy, it is best for him or her to employ a doctor to help him perform these procedures. The use of nursing staff in procedures such as hair transplantation for parts of the procedures which are repetitive and does not require decision-making may be delegated to trained paramedical staff. Almost all other procedures are best performed by the doctor, not only from the patient's satisfaction point of view in addition to it ensuring better results; but also from the medico-legal standpoint.

FF: Suggestions, advices for younger dermatologist/residents who to make their career in procedure dermatology.

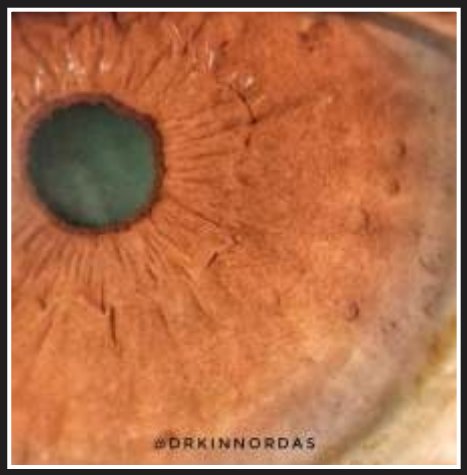
Dr. Chatterjee: I would only suggest that procedural dermatology in addition to clinical and not in the exclusion of it, is the way to go. A good procedural dermatologist is one who has sound knowledge of the skin and its disorders and who has the skills and expertise to use modalities beyond medicines, to treat the patient.

Thank you so much sir for sharing your experience

Dr. Farhat Fatima,
PG 3
Medical College,
Kolkata, West Bengal

Through my lens

DR. VIVEK KR. SAHU
PG 2
Silchar Medical College
Assam



Dr. Kinnor Das
PG 3
Silchar Medical College and Hospital,
Silchar Assam

Igniting and Initiating the Interventional Innovation engine
The Indian perspective!

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"There is a way to do it better. Find it!"

I must have seen this quote by Mr Thomas Alva Edison a thousand times. Literally! It adorned the section hospital walls where I was once posted as a (young) medical officer in the Army Medical Corps. I would pass it and ponder over it for hours and days together. But this simple, one-line-adage proved to be a guiding light of sorts, making me introspect and retrospect, on the things that I had conjured up, over the years. And as Indians, especially as doctors, we all have been innovating, inventing and re-engineering things and situations our whole lives. We just haven't stopped to realise it. I can clearly envision the day when the word 'jugaad' will make its way to the Oxfords and Merriam-Websters of the world, sharing print space with other Indian-origin words like chai, bungalow, pundit, guru and so on.

So what fuels this engine? I have asked myself this question multiple times. To be brutally honest, when I was younger, I was fascinated by science (as most of you would be, as well!) and inventions. But since it never came to me naturally, I always thought an innovation was something that 'other people do / did.' It was only a few years back, when it dawned on me that I could be (and subconsciously was) innovating all this while! Innovation, in its truest sense is a combination and culmination of creativity, vision, imagination, exploration, discovery and collaboration. The last word, to my mind is the most important one. A cohesive unit can form a great team which executes ideas, culminating creativity into innovations.

Without further ado, let me discuss a few simple innovations from a few such prolific research groups and teams, including ours, which have facilitated the beginning-to-end of an existing modality or system, using a different route. Keeping in tune with the theme of this book, I have restricted this writeup solely to procedural dermatology. And as the article unfurls, it will be evident why Indians are at the pinnacle of things when it comes to innovation.

The author has segregated these interventional innovations into – anesthesia and pre-procedure-related, during and post-procedural. The first innovation being discussed here is related to anesthesia. The authors (Subhadarshani, Parambath et al, 2018)1 used a lumbar puncture needle to reduce the number of pricks to deliver local anesthesia more effectively. In the same breath, the research group (Sandeep Agrawal, Aseem Sharma et al, 2019)2 used simple surgical gloves and frozen normal saline to achieve effective cryoanesthesia. Another group (Sanjeev Gupta, Ravi Shankar et al, 2019)3 improvised on the same and used refrigerant jelly in lieu of normal saline to achieve the same result.

Other dermatosurgical innovations include adding a resource-poor light source to illuminate the field for a radiofrequency electrode (KT Ashique and Feroze Kaliayadan, 2017)4, radiofrequency subcision in atrophic acne scars (Yadav and Gupta, 2018)5, the innovative utilitization of neodymium magnets post-surgery to prevent keloids (Sanjeev Gupta and Ravi Shankar, 2018)6, or using a biopsy punch to effect fractional devolumization of keloids. (Sanober Daruwalla, Rachita Dhurat et al, 2019)7 Cryotherapy delivery has also been the target of a few innovations – targeted (out of a Styrofoam cup; courtesy KT Ashique and Feroze Kaliayadan, 2019)8, and fractionated cryotherapy, courtesy Sanjeev Gupta et al, 2019.9

Hair transplantation has also seen its share of improvizations – a click counter to keep a track of follicular units (Rachita Dhurat, Aseem Sharma et al, 2019)10, a simple tea sieve to cleanse follicular grafts (Sandeep Agrawal,

Rachita Dhurat et al, 2019)11using a bangle to achieve ring hemostasis (Rachita Dhurat, Sandeep Agrawal et al, 2019)12, an eponymous innovation – the Kerure clamp (Amit Kerure, Alex Ginzburg et al, 2019)13, and a faster way to estimate and calculate the volume of platelet rich plasma required based on the alopecia area (Sandeep Agrawal, Aseem Sharma et al, 2019)14.

Utensils and household items often fascinate us, as these are objects we have used on a daily basis nearly all our lives. I had previously mentioned the sieve used at Agrawal et al11 to cleanse follicular grafts. Another research group (Venkataram Mysore, Madhulika Mhatre et al, 2015)15 made use of a stainless steel thali to host an array of instruments as a dermatosurgery tray. Depth-control intralesional injections by using its guard is another simple innovation (Sanjeev Gupta, Ravi Shankar et al, 2016)16 that readers can start implementing in their department procedure rooms from tomorrow itself! Yet another use of the hypodermic needle as a lever for assisting biopsies of adequate depth has been published. (Sandeep Agrawal, Aseem Sharma et al, 2019)17 Haven't you ever wished you had more control over your chemical cautery agents – especially over small molluscum lesions. The group (Sandeep Agrawal, Aseem Sharma et al, 2019)18 used a Chinese fountain pen and replaced ink with potassium hydroxide to improve the precision of application.

Vitiligo surgery has also come forward with a multitude of transformations. Dermabrasion, which is the essence of vitiligo surgery, has been made easier by these simple innovations – a sandpaper, cut-to-size, (KT Ashique and Feroze Kaliyadan 2018)19 a hypodermic needle (Sanjeev Gupta, Somesh Gupta et al, 2015)20 both of which have been used to give formidable results. In resource-poor settings where non-cultured suspension is desired, this research group (Sandeep Agrawal, Aseem Sharma et al, 2019)28 devised a highly economical incubator using a tin can, an incandescent light, a fan regulator and a sensor. In vivo trypsination has been described by Sanjeev Gupta et al21; the same research group also switched the nutrition media Dulbeco's Modified Eagle Medium (DMEM) to platelet rich plasma (PRP) for graft imbibition. An oblong chalazion clamp devised by Ashique et al for better dermabrasion and handling of lip vitiligo22, and yet another fine innovation – 'non-cultured, non-tryspinized epidermal cell transfer', made famous as the Jodhpur technique. (Dilip Kachhawa et al)23

A few miscellaneous, honourable mentions – a Y-configured bandage to make nail dressings easier and durable, (KT Ashique, Chander Grover)24, an intralesional injection drainage-overflow system (Deepak Jakhar, Ishmeet Kaur)25, dermabrasion as a tool to refresh earlobe cleft edges, (KT Ashique, Feroze Kaliyadan)26 and the 'trap technique' of using a penrose drain to achieve proximal and distal exsanguination for pyogenic granuloma excision. (Deepak Jakhar, Ishmeet Kaur)27

Now this, by no means serves as a compendium. It's literally the tip of the iceberg! Please take note that for every innovation that I wrote about, I (must) have omitted two or three which I could not cover within the scope of this article. And the recent crescendo in innovations is the reason why as young residents and researchers, you can spark off your innovative minds and send your ideas to a plethora of Indian and international journals. Even conferences like AAD and ACSICON encourage innovations and have ticketed sessions for the same, not to mention lucrative prizes.

To conclude, a thousand-mile-journey begins with a single, small step. Take it, and start your 'innovative' journey!

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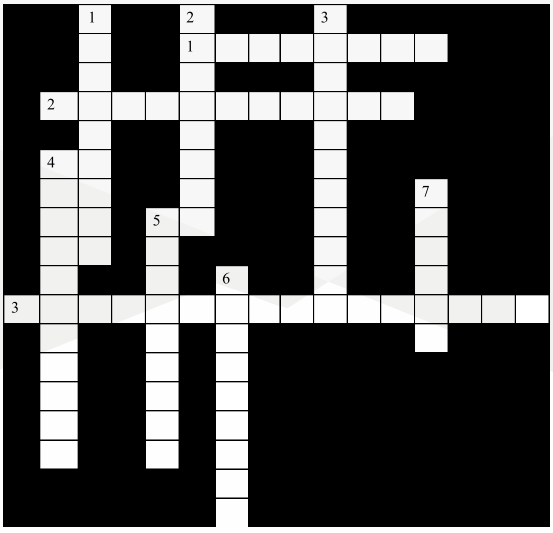
BRAIN TEASERS

Crossword - 'Fathers In Dermatology'



VERTICAL

1. FATHER OF PATCH TEST:
2. FATHER OF ELECTROCAUTERY:
3. FATHER OF BOTOX:
4. FATHER OF LASERS:
5. FATHER OF CRYOTHERAPY:
6. FATHER OF PHOTODYNAMIC THERAPY:
7. FATHER OF PHOTOTHERAPY:

HORIZONTAL

1. FATHER OF GENE THERAPY:
2. FATHER OF CRYOSURGERY:
3. FATHER OF HAIR TRANSPLANTATION:

DR. ANUSHA J
PG-3
DR.PSIMS &RF,
GANNAVARAM,
ANDHRA PRADESH.

DR. AKSHAY JAIN
PG-3
DR.PSIMS &RF,
GANNAVARAM,
ANDHRA PRADESH.

Radiosurgery

- It is defined as the use of tissue resistance to the passage of high frequency alternating current to convert electric energy into heat, resulting in thermal tissue damage.
- K/a- Poor man Laser, Cold Cautery, Modern Electrosurgery, High frequency electrosurgery.

Figure 1 : The electric circuit

The Radio frequency Equipment

- RF Generator or Unit.
- Hand Piece + Activating Switch/ Foot Paddle.
- Electrodes of various shapes and sizes.
- Antenna Plate (Non metal).

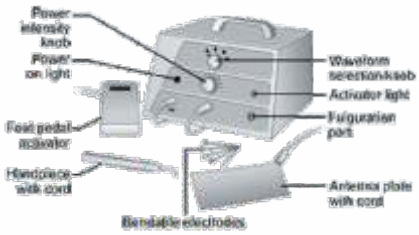


Figure 2: The equipment

Mechanism Of Action

1. Electrode touches the skin

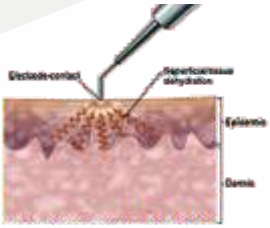
2. Tissue resistance leads to boiling of intracellular and extrac ellular water molecules.

3. Consequent heat generation causes tissue necrosis.

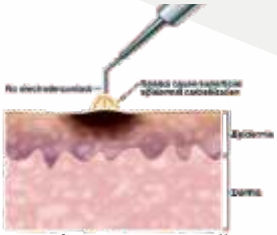
4. Electrode cuts through causing very thin splitting of tissues

Rf Tissue Effects

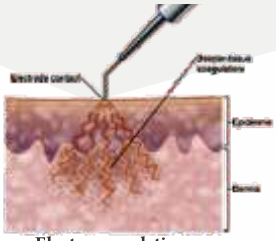
- ***Tissue cutting:*** Electro-section: A smooth cutting current, simultaneously produce cutting and coagulation, least amount of lateral heat spread with minimum tissue destruction.
- ***Deep tissue destruction (electrocoagulation):*** Instant homeostasis treatment of lesions in which coagulation is required.
- ***Superficial tissue destruction (electrodessication and electrofulguration):*** Greatest amount of lateral heat spread. Electrode is held at a distance from skin lesion in fulguration, if tissue is touched with electrode it causes desiccation.



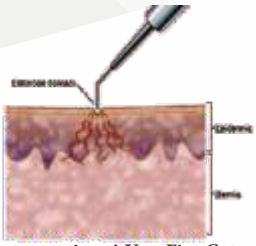
Electrodessication For Superficial Destruction Of Lesion



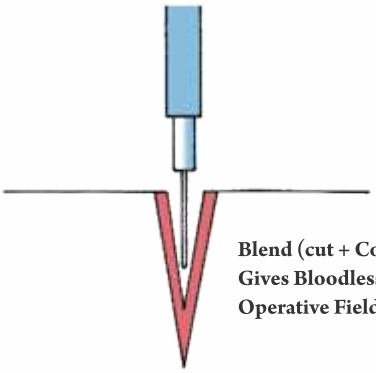
Fulguration, Rf Waves Jump A Small Distance For Superficial Destruction Of Lesion



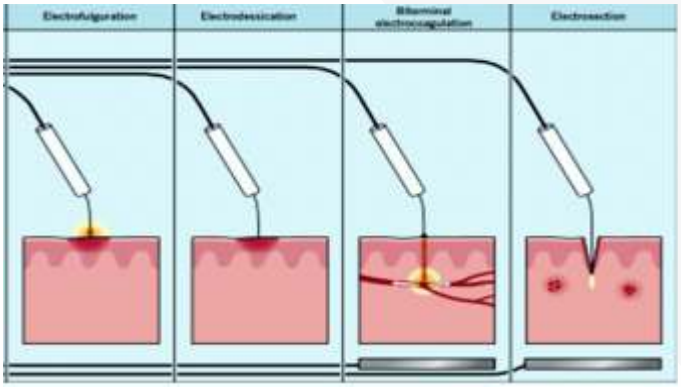
Electrocoagulation For Hemostasis



Electro-section: A Very Fine Cut, Cuts Exactly Where Electrode Touches



Blend (cut + Coag: 50%–50%)
Gives Bloodless
Operative Field



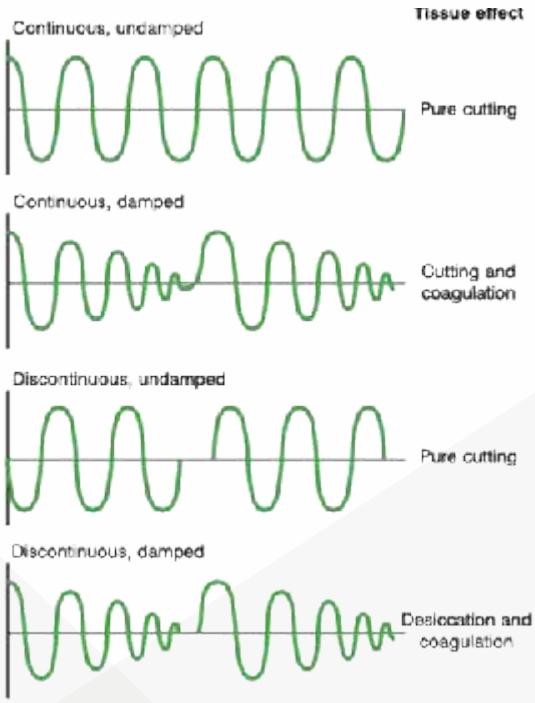
MONOTERMINAL VS BITERMINAL

Different Waveforms Of Rf And Uses

Waveforms can be dampened or undampened, rectified fully or partially, continuous or discontinuous

- An undampened wave refers to pure sine wave of electromagnetic energy that causes pure tissue destruction with minimum hemostasis.
- Oscillations exhibit fall in amplitude called damping.
- Greater damping leads to increased tissue damage and hemostasis, less damping leads to less hemostasis with better healing.
- Continuous waves cause greater tissue heating.
- The process of rectification means trying to undampen the waveforms.
- Partial rectification- moderately dampened waveforms.
- Full rectification- slightly dampened wave.
- Fully filtered and rectified- completely undampened sine wave.

Different Modes of Electrosurgery



END POINTS

Methods	End Point
Electrodessication	Lesion shrivels up and lightens in color wi th formation of superficial ash. Larger lesions bubble when dermo-epidermal separation occurs due to vapor generated by steaming of tissue fluids.
Electrofulguration	Charring of the tissue.
Electrocoagulation	Discoloration, a popping sound or emanation of a wisp of smoke with no further oozing. In case of larger lesions , end point is loss of bubbling effect on the lesion and visual conformation of complete destruction of the lesion
Electrosection	Separation of tissue with adequate hemostasis

PHYSICAL PARAMETERS

- ***Radiofrequency power :*** Optimum power gives best results; lateral tissue damage is directly proportional to power. Coagulation - higher power settings than cutting.
- ***Electrode size :*** Lateral heat dispersion is directly proportional to size of electrodes.
- Time of tissue contact : Lateral heat dispersion is directly proportional to time of electrode–tissue contact.
- ***Waveform :*** A fully filtered or cut waveform is least damaging to lateral tissues, whereas blend (cut + coag) and electrocoagulation waveforms are more damaging to lateral tissues.
- ***Presence of moisture (saline gauze) :*** Prevents charring.
- ***Waiting period :*** Waiting period of 10s is ideal between two passes of electrode used for cutting - allows adequate cooling and prevents cumulative heat damage.

INDICATIONS

Indications	Disease/Disorders
Diagnostic	Skin biopsy, excision of cysts and abscesses.
Infections	Verrucae and molluscum contagiosum
Metabolic	Xanthelasma, xanthomas
Benign skin conditions	Freckles, dermatitis papulosa nigra, acne, skin tags, cherry angiomas, spider angiomas, naevi, trichoepithelioma, syringomas, apocrine hidrocystomas, stucco keratosis, papilloma, neurofibromas, cutaneous horn, keratocanthoma, rhinophyma, sebaceous hyperplasia and keloids.
Senile skin conditions	Actinic keratosis, seborrheic keratosis and senile lentigenes
Malignant skin tumors	Squamous cell carcinoma, basal cell carcinoma, dermatofibroma sarcoma protuberans and carcinoma in situ lesions of the skin and orogenital mucosa
Nail procedures	Nail matrixectomies, surgical hemostasis of ingrown toenail
Vascular	Pyogenic granuloma , telangiectasias, spider nevi, venous lakes

PATIENT SELECTION

- Informed consent, Photo-documentation to be taken prior to surgery.
- Patient should be informed that part/ whole of the lesion may be sent for H/Pathology.
- Detailed history should be taken.
  - Keloidal tendency
  - H/O blood thinning agents/antiplatelet drugs
  - H/O pacemaker
  - H/O previous local anesthesia
  - H/O poor healing – diabetes/ vasculopathy

PRECAUTIONS

- Patient should remove all jewelry, avoid contact with grounded metal objects to minimize risk of electric burns.
- Non-alcohol containing solution such as chlorhexidine or povidone- iodine should be used.

FINE TOUCH DESICCATION METHOD

- Apply topical anesthetic cream - lidocaine + prilocaine.
- Monopolar monoterminal method, hence no antenna plate.
- Power setting is done as required.
- Straight needle/vari-tip/dessication electrode as per guidelines.
- Single lesion is selected at a time and very finely touched multiple times to desiccate it fully (lesion turns white).

SHAVE EXCISION METHOD : ELECTRO SECTION AND BLEND

- Local Anesthesia is given.
- Normally fully filtered or cut wave-form is selected for all lesions which is 90% cut and 10 % coagulation
- For vascular lesions which can bleed profusely while shaving, fully rectified or cut + coag is selected.
- Round loop electrode / cutting needle/ narrow blade for electrosection
- Electrode held at angle of 30-60 degrees.
- Lesion removed stepwise using delicate strokes.
- If electrode drags power is lower, sparkles—> higher
- Warts ,corns ,callosities - triangular or diamond shaped electrodes are used.
- Edge of shaved lesion blended with adjoining skin
- Power of 3-5 watt - for routine shave excision.
- Power of 4-6 -Thicker lesion on cut mode.
- Power of 4-10 –when cut or coagulation is used.
- Ideal speed is 5-10 mm/ sec
- Separation of tissue with adequate hemostasis- end point.
- Hemostasis is achieved with pressure or electrocoagulation

ELECTROFULGURATION METHOD

- Oozing small bleeders can be directly touched with electrode tip or else hold with artery forceps/mosquito/pressured gauze and touch the electrode on the mosquito/gauze.
- Monoterminal electrocoagulation is used for hemostasis and telangiectasias. High power setting, short burst of current (1-2s).
- Biterminal electrocoagulation for skin growths (benign and malignant),Longer bursts of current (4 to 5 sec), high power intensity.

COMPLICATIONS

- Post - op Dyschromia
- Post - op erythema
- Post - op Scarring
- Recurrence of moles, warts, corns and keloids.

FURTHER READING

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- Satish Sawant.Textbook of Dermato-surgery and Cosmetology

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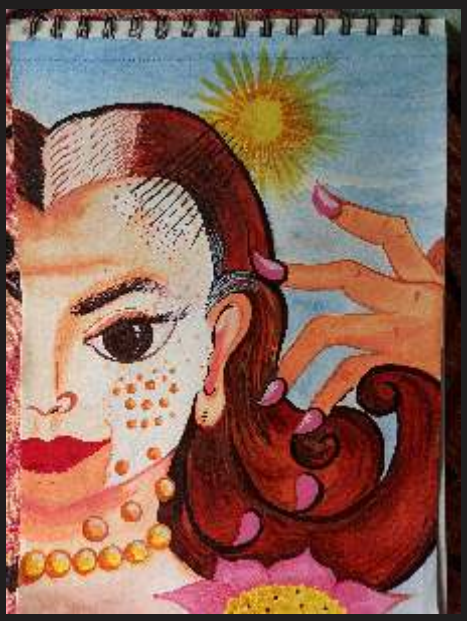

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Congenital Eccrine Spiradenoma: A Rare Adnexal Tumor

INTRODUCTION:

Eccrine spiradenoma is a rare benign adnexal neoplasm originating from sweat glands. Around 50 cases of eccrine spiradenoma have been reported in the literature till date. It presents as solitary intradermal nodule or multiple in linear or zosteriform pattern. Eccrine Spiradenoma may present congenitally or spontaneously as tumor of the sweat glands with unclear etiology. It Can occur as a part of Brooke –spiegler syndrome. This can be mistaken for glomus lesions due to its painfulness and vascularity surgical excision is the gold standard treatment.

CASE REPORT:

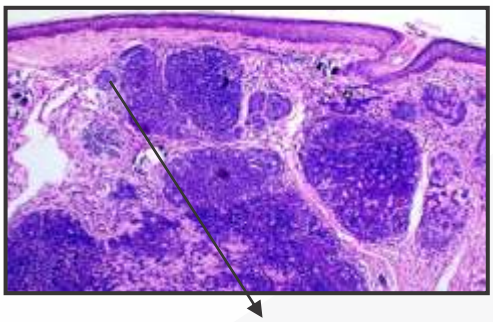
A12year old female presented to the Dermatology outpatient department with chief complaints of swellings on the face on right upper lip from birth / early childhood.

The swelling mildly increased in size gradually over this period. On examination, a papulo nodular lesion located below the right nasolabial fold measuring 1.2 cm × 1.0 cm was noted. A single small satellite lesions near philtrum was seen. Hematological and biochemical profile were within normal limits. With the provisional diagnosis of possibly benign soft tissue tumor, excision biopsy was performed.

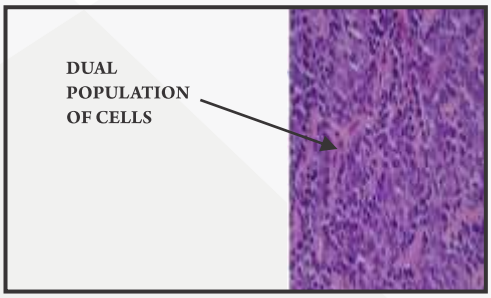
HISTOPATHOLOGY:

Biopsy showed in middermis deeply basophilic tumor cells, arranged in well circumscribed lobules of various sizes .Dual population of cells are seen larger, pale cells with ovoid nuclei and another type of cells were small and dark with hyperchromatic nuclei. No evidence of increased mitotic activity and hemorrhage/ necrosis noted.

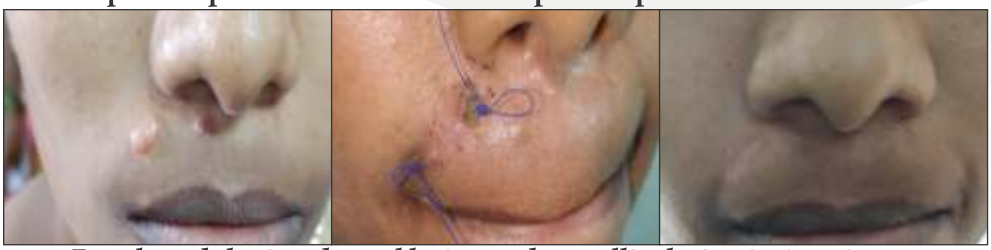
Based on these findings and correlating with clinical and imaging findings, final diagnosis benign eccrine spiradenoma was made.



Sharply demarcated lobules of deeply basophilic tumor cells in dermis with out connection to Epidermis



Pre operative picture **Post operative picture**



Papulonodular intadermal lesion and a satellite lesion in 1 st picture

DISCUSSION:

Eccrine spiradenoma may present congenitally or spontaneously as a tumor of sweat gland. Mostly it presents as a small and painful nodular lesion on ventral aspect of upper body. However the most striking clinical feature tenderness is absent in this case.

Few noteworthy points: firstly, it is well documented in the literature for its recurrence and secondly, its ability to transform into malignant counterpart.

While eccrine spiradenoma is rare, malignant spiradenoma is still rarer. Rate of malignant transformation of this benign tumor is very low with a metastasis rate of 50% which can prove fatal for the patient.

In patients with long-standing benign eccrine spiradenoma, malignant transformation is known to occur and presents as as rapid enlargement of the nodule, increase in number, and change in color or with appearance of few symptomssuch as pain and ulceration.

Malignant spiradenoma shows increased mitosis, pattern less proliferation, foci of necrosis,and the extension of the tumor cells along the line of the fibrous capsule. These findings were not found in our case.

CLINICAL DIFFERENTIAL DIAGNOSIS:

Glomus tumor,Angioleiomyoma,Aggregated lymphatic nodules

HISTOLOGICAL DIFFERENTIAL DIAGNOSIS :

Glomus tumor and cylindroma

CONCLUSION:

Early accurate diagnosis is very important in preventing chances of recurrence and more importantly identifying onset of malignant transformation. Due to rarity of tumor and characteristic histopathology of spiradenoma in our case we are reporting this case.

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Use of 40% Hydrogen Peroxide in the treatment of Seborrheic Keratosis – A new therapeutic modality.

Introduction:

Seborrheic keratosis (SK) is a common benign lesion, usually round or oval, ranging from light tan to dark brown, which occurs over the sun-exposed areas. Patients with SKs have wide ranges of motivations for being treated, including embarrassment from the unsightly nature of the lesion, physical irritation or pruritus, and a desire to have a better appearance. [1]

Conventional techniques for SK removal involve cryosurgery, electrosurgery, curettage, or surgical excision. [2] There is however, a notable lack of well-controlled clinical studies evaluating the efficacy and complication rates of these procedures.

Thus, there is a significant and unmet need for a safe, effective, non-invasive, and cosmetically acceptable treatment for this common condition.

Preliminary evidence shows promise for an agent Hydrogen peroxide (HP) topical solution 40%, and it is the first and only US Food and Drug Administration approved topical treatment for raised SKs. HP acts through direct oxidation of organic tissues, generation of reactive oxygen species that are toxic to SK cells. [3-5] However, only a handful of studies have been done, and significant data is lacking, so we have taken up this study.

METHODOLOGY:

In our study, we included all the clinically diagnosed cases of seborrheic keratosis. Patients with SK over eyelids and within 5mm of orbital margin, those with H/O hypertrophic scarring or keloid formation, infection at the site of application, and Pregnant or Lactating women were excluded.

Participants who met the fixed criteria were taken into the study. After taking informed consent, the SKs were cleaned with spirit, and then 40% H2O2 was applied with firm pressure for 20 seconds in a circular motion using a toothpick applicator. This procedure was done similarly as explained above, four times with a time gap of 60 seconds. The formation of white layer over lesions was noticed, as shown in figure 1&2, and the patient was monitored for 20min after treatment.

At each visit, SKs were graded using the Physician's Lesion Assessment (PLA) scale (0 : clear; 1: nearly clear; 2: <1 mm thick; and 3: >1 mm thick. After the first session, SKs with a PLA score higher than 0 were re-treated 2 weeks later, maximum for three sessions and followed up for one month after the last session, and clinical photographs were taken at each session and 1 month after cessation of therapy.

RESULTS AND DISCUSSION:

In our study, among patients treated with HP after first sitting, PLA scale 0 was achieved in 30%, whereas in a study done by Leslie S. Baumann et al. [6] it was seen in 25% of patients. After the end of therapy, PLA scale 0 and 1 were achieved in 85% of patients with HP, whereas in a study done by Leslie S. Baumann et al. [6], it was observed in 72% of patients.

Our study showed a good response with HP, and it was similar to the study done by DuBois JC.et al. [7]. In our study, adverse effects were mild to moderate (erythema 60%, scaling 35%, and hypopigmentation 25%) and self-limited. Most

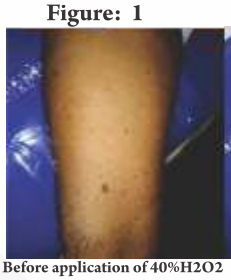
lesions generally resolved by the end of the study.

Future evaluations of HP compared with traditional destructive procedures (e.g., cryosurgery) may have clinical utility.
The current results demonstrate that HP is more effective in the treatment, with a low risk of inducing pigmentary changes and scarring.

CONCLUSION:

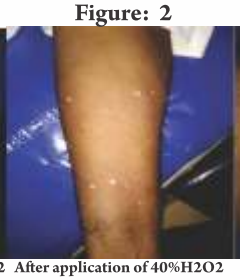
Thus, Hydrogen peroxide 40% provides a novel, standardized, readily available and non-invasive, method to treat SKs.

Figure: 1



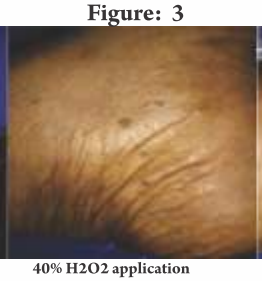
Before application of 40%H2O2

Figure: 2



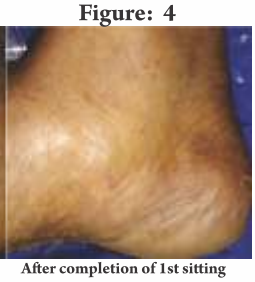
After application of 40%H2O2

Figure: 3



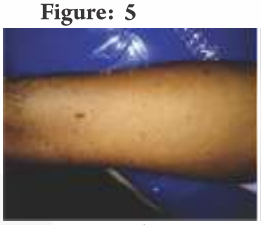
40% H2O2 application

Figure: 4



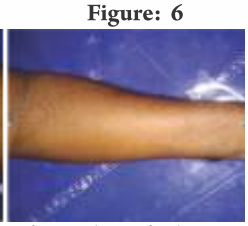
After completion of 1st sitting

Figure: 5



40% H2O2 application

Figure: 6



After completion of 2nd sitting

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CASE REPORT

Comparative Study Of Efficacy Of Intradermal Tranexamic Acid Versus Topical Tranexamic Acid Versus Triple Combination In Melasma.

INTRODUCTION

Melasma is an acquired circumscribed hypermelanosis of the sun-exposed skin characterized by brown-black macules or patches affecting mainly the face. Based on Wood's lamp examination, melasma can be classified as : Epidermal, dermal and mixed.

Fluocinolone based triple combination (hydroquinone 2%, tretinoin 0.025%, fluocinolone acetonide 0.01%) is considered to be a safe option with little or no side effects.

Tranexamic acid (TA), an inhibitor of plasminogen activation, has been recently used in the treatment of melasma. The exact mechanism of action of Tranexamic acid is still unknown, but evidence shows that it can reduce melanin content of epidermis, decrease dermal vascularity and mast cell numbers. The aim of our study was to evaluate the efficacy and safety of intradermal Tranexamic acid v/s topical Tranexamic acid v/s topical triple combination.

METHODOLOGY

Single centered, prospective, Randomized control clinical trial was performed with the aim of studying the efficacy of intradermal tranexamic acid v/s topical tranexamic acid v/s topical triple combination in melasma. A total 205 patients who presented to the Dermatology OPD with complaints of hyperpigmentation over face were included in the study. Total of 25(5+16+4) subjects were lost to follow up in Group A, B and C respectively.

Inclusion Criteria

All melasma patients of any severity, who completed 18 years of age and who were willing to give written consent were included.

Exclusion Criteria

Patient with hypersensitivity to drug or patients who were intolerant to the study medication.
Pregnant and lactating patient
Patients with clotting disorders or on anticoagulant treatment.

Drugs and dosage

Patients were randomly divided into three groups:

Group A (60 patients) were given intradermal tranexamic acid 0.05ml(4mg/ml) in each cm2 melasma using an insulin syringe with a 30-gauge needle after application of topical anaesthesia with lidocaine + prilocaine every 15 days.

Group B (60 patients) were given topical application of 3% tranexamic acid cream once a day.

Group C (60 patients) were given topical application of triple combination (hydroquinone 2%,tretinoin 0.025%, fluocinolone acetonide 0.01%) once in night and with the application of emollient in the morning.

At each visit, patient was assessed for efficacy by Melasma area severity index (MASI). Total MASI score was given as 0-48.

Laboratory tests required for the study included hemogram and coagulation tests (bleeding time and clotting time) for Group A & B which were checked at first visit and at 6 months. Patients were asked to follow up regularly every month for 6 months to assess safety and efficacy.

The collected data was compiled in MS excel sheet 2007, for analysis SPSS version 20.0 was applied. The qualitative data was represented in form of frequency and percentage. The

quantitative data was represented in the form of mean and standard deviation, etc. For comparison of three groups ANOVA was applied. P value was checked at 5% level of significance.

RESULTS AND DISCUSSION

This study was a randomized controlled clinical trial done from 2016 to 2018. A total of 180 patients who fulfilled the inclusion criteria were selected by convenience method. They were divided into 3 groups namely group A, group B, group C with intradermal Tranexamic acid, topical Tranexamic acid and triple combination treatment groups respectively.

In this study, age ranged from 18 to 60 years, with a mean age of 33.7 years.

Females formed majority (80%) of our study.

In our study, 62% of study subjects were having outdoor occupations while rest 38% had an indoor occupation. This was found to be significant.

The majority were from rural areas (62%), and the rest 38% were from urban areas.

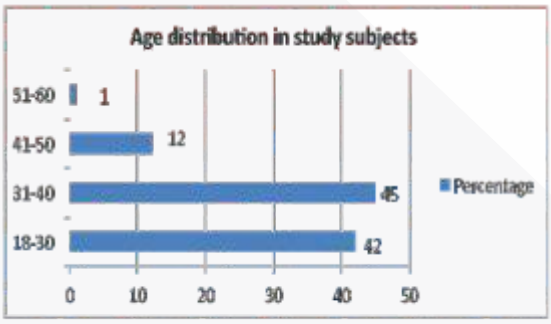
78% of subjects did not have a family history of melasma.

Mixed type(79%) of melasma was the most common; next was the dermal type(12%)

The malar pattern of melasma was most commonly seen with 54% of study subjects.

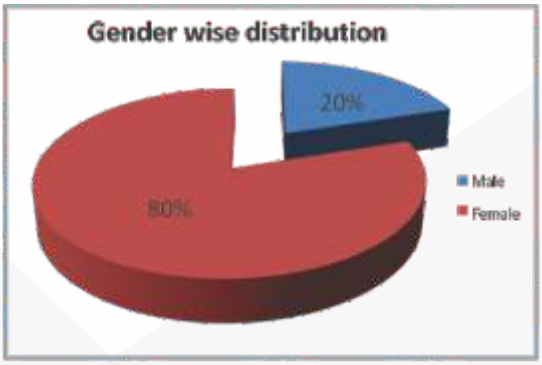
Sun exposure was found to be most common (80%) aggravating factor in melasma patients.

Duration of melasma ranged from 3.2± 4.2 years. Subjects with melasma for duration of less than 5 years showed significant improvement, so did mixed type of melasma.



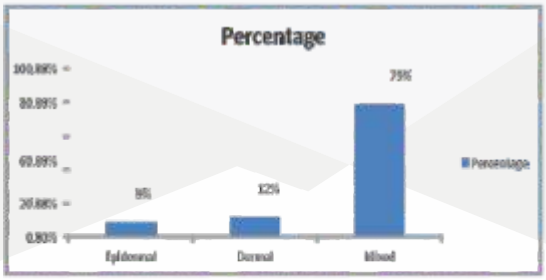
45% of the study subjects were in 31-40 age group

Diagram 1: Age wise distribution



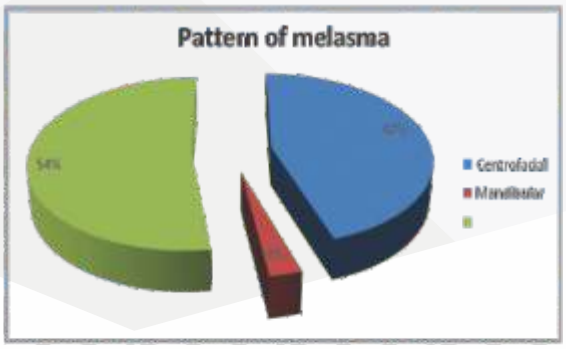
There were 144 females (80%) in the study.

Diagram 2: Gender wise distribution



79% of study subjects had Mixed type of melasma.

Diagram 3: Types of melasma on Woods lamp



Malar type pattern of melasma was most commonly seen with 54% of study subjects.

Diagram 4: Pattern of melasma on study subjects

CASE REPORT

MASI score improved more in group A & group C (statistically significant) compared to

group B. Absolute MASI score values at each month did not show any significance between

three groups, but there was a proportionally more considerable decrease in MASI score in group A and group C. The improvement after treatment in the three groups are depicted as Group A(before Fig. 1,2,3 and after Fig. 4,5,6) and group B(before Fig. 7,8,9 and after 10,11,12) and Group C(before Fig. 13,14,15 and after 16,17,18).

There was a significant association between occurrences of side effects in all three study groups, with group A and B showed fewer side effects than the group C. Mild discomfort, burning sensation, and erythema were observed when it was used intradermally. Side effects are depicted in Fig. 19,20,21.

Triple combination is the mainstay treatment of melasma for decades but it has significant side effects. Based on these results, TA can be used as a potentially new, effective, safe and promising therapeutic agent in melasma. The medication is readily available and affordable.

Better therapeutic response to treatment in the intralesional group could be attributed to the deeper and uniform delivery of the medication through intradermal route.

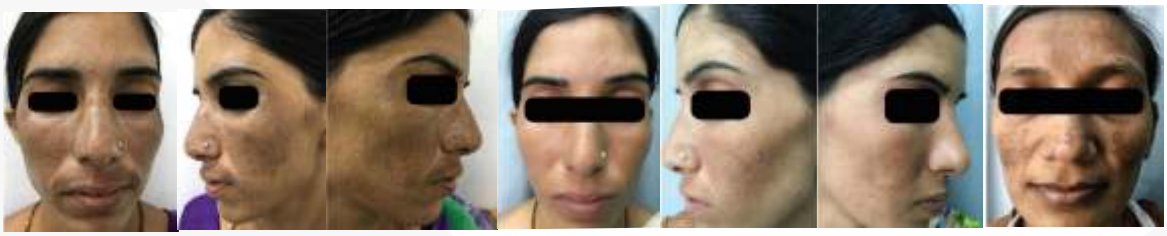


Fig 1 : Group A Before Treatment
Fig 2 : Group A Before Treatment
Fig 3 : Group A Before Treatment
Fig 4 : Group A After Treatment
Fig 5 : Group A After Treatment
Fig 6 : Group A After Treatment
Fig 7 : Group B Before Treatment

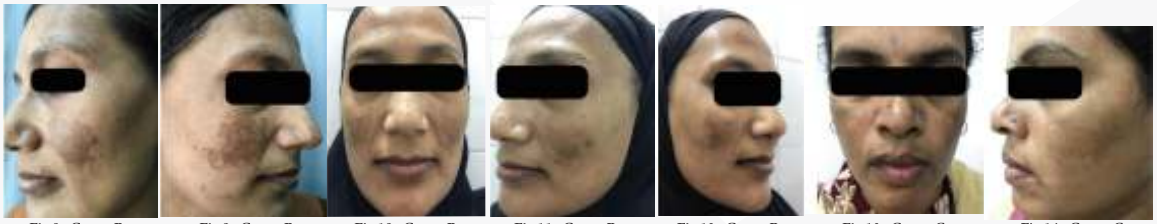


Fig 8 : Group B Before Treatment
Fig 9 : Group B Before Treatment
Fig 10 : Group B After Treatment
Fig 11 : Group B After Treatment
Fig 12 : Group B After Treatment
Fig 13 : Group C Before Treatment
Fig 14 : Group C Before Treatment

Fig 15 : Group C Before Treatment
Fig 16 : Group C After Treatment
Fig 17 : Group C After Treatment

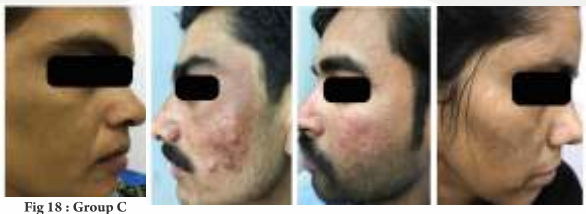


Fig 18 : Group C After Treatment
Fig 19 : Group C Side Effect - Acne Eruption
Fig 20 : Group C Side Effect - Acne Eruption
Fig 21 : Group C Side Effect Hypopigmentation and Hypertrichosis

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CASE REPORT

Endless Faith...infinite Hope

Noah's ark is a legendary Bible story about the God's decision to return the Earth to its pre – creation state of watery chaos in the form of The Great flood and then remake it. Noah, a righteous man was instructed to build a Giant Ark and save himself, his family and a pair of all of the God's creation before "the floodgates of heaven broke open".

At the end of the forty days of deluge, Noah emerged from the Ark. He disembarked full of hope, looked around him, but all he saw was destruction and death. Noah cried out, "Lord, if you knew the future, why did you create man? Just for the pleasure of punishing him?"

And God replied, "Prayers are always heard. Let me tell you why I did this: so that you might understand my work. You and your descendants will use hope and will always be rebuilding a world that came from nothing. In that way we shall share the work and the consequences: now we are both responsible."

As much as I believe in destiny, I also believe that humans are always bestowed with the power of "free will". We are presented with opportunities and challenges. But how we react to them is entirely up-to us. It is a choice that we make each day. And it is a power that can't be taken away. Our fate lies within us. We only have to be brave enough to see it.

I still remember scrolling down the allotment list and seeing M.D Dermatology, Silchar Medical College, against my name. As much as I was relieved about getting my dream branch, I was scared out of my wits. Being a girl from Kerala, who had never travelled alone outside the state, I had no clue how I was going to do it. Most people in my life well-meaningly told me to compromise on the branch and stay back home. My parents were frantic. I was the youngest of the whole generation of my family – their pampered, sheltered "kid". I remember my dad sitting me down and asking, "Are you really sure about this? Are you going to survive?". I did give it a lot of thought. The distance was scary. I did have lot of options in my state. The comfort zone was tempting. But then, I reasoned that if I sacrificed my dream just because I was afraid to step out of whatever I have been familiar with, I was going to regret it all throughout my life. I have always hated "what if's".

Silchar came with totally new challenges. My Hindi was pathetic. Bengali was an altogether different territory. My typical day is listening intently to conversations, picking out random English words, piecing it together in my head and trying to make sense. During my first week, I remember trying to order food and it was then that I actually realised how poor my Hindi was. Since it was a telephonic conversation, my "sign language" was not helping. As he cut the call in exasperation, my eyes welled up. I was hungry and helpless. I hadn't been both - in a long time. Being someone who had always been fiercely independent, it was a huge blow.

Over time, I picked up the essential words. Moreover, I learnt to ask for help. I learnt to be thankful for the most basic things in life like a roof over my head, food on my table, and a good night's sleep– all the things I had taken for granted all throughout my life.

I learnt how underrated the power of a smile is. Because, I can't communicate very effectively with patients right now, most times, all I do is smile. I realized that sometimes if you smile and nod your head, people are more than happy.

I learnt that humans are relentless. And, no matter whether you are in Kerala or Kashmir or Silchar – people are the same. We are driven by the same emotions – the need for validation, love, fear, …

Sometimes when I am overwhelmed, I remind myself that I am "living the dream" and no distance or fear can take that away. And if I were to go back in time, I would do it all over again.

And what I would not have given for this, when I was busy drowning myself in MCQ books last year.

And every-day when I walk into our department, I know that I made the right decision.

My HOD, teachers, seniors and co-postgraduates have been incredibly kind. To a girl who is 3656 km away from her house, they created a new home. And now I know why people say that home is not a place, it's a feeling.

Too often we underestimate the power of touch, kind words, a listening ear, an honest compliment or the smallest act of caring – all of which have the power to transform lives.

It is disheartening to hear stories of PG residents who decide to end their lives. And it makes me wonder "what if" – what if there was at-least someone who had caught them when they fell. What if they had not given up on themselves. In this era of medical litigation where doctors are portrayed as villains at the drop of a hat, if we don't have each other's back, who else will? I am too young and inexperienced to spin out long theories. But I hope that,whoever you are and wherever you are from, that your faith is bigger than your fears. I hope that you remember that pain is temporary and eventually something else will take its place. Always.

And I hope that in a world where you can be anything, you choose to be kind.

Let me conclude with my favorite Eric Hanson quote – "There is freedom waiting for you on the breezes of the sky and you ask, 'What if I fall?' 'But oh my darling, what if you fly!"

And to all my fellow residents out there – may you always remember that you are braver than you believe, stronger than you seem, smarter than you think and loved more than you will ever know. May you grow through whatever you go through. Carpe diem!!

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PG 1
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Chemical Peels

INTRODUCTION

- The concept of peeling the skin to improve the texture, smoothen and beautify has been used since ancient times.
- In ancient Egypt, Cleopatra used sour milk.
- French women- old wine containing tartaric acid.

DEFINITION

Chemical peeling or chemexfoliation is an application of one or more chemical agents to the skin so as to cause controlled chemical burns, resulting in destruction of a portion of the epidermis and / or dermis through dry desquamation or moist maceration followed by its exfoliation and subsequent resurfacing of epidermis along with remodeling of collagen and elastic fibers and the deposition of glycosaminoglycans during the repair process in the dermis.

CLASSIFICATION OF PEELS

STEP 01 BASED ON MECHANISM OF ACTION

STEP 02 BASED ON CHEMICAL COMPOSITION

STEP 03 BASED ON INDICATIONS

STEP 04 BASED ON HISTOLOGICAL DEPTH OF NECROSIS OF SKIN

CLASSIFICATION BASED ON MECHANISM OF ACTION

MECHANISM OF ACTION	PEELS
METABOLIC ACTION	AHA'S, AZELAIC ACID,RETINOI C ACID
CAUSTIC ACTION	TCA
TOXIC ACTION	PHENOL,RESORCINOL,SALICYLIC ACID

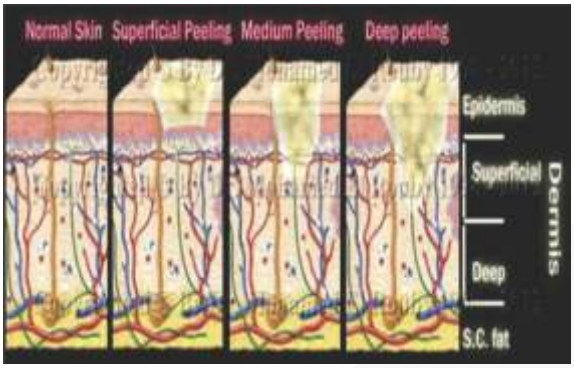
CLASSIFICATION BASED ON CHEMICAL COMPOSITION:

CATEGORY	GROUP OF NATURAL ACIDS FOUND IN FOOD	NATURAL SOURCE
1. ALPHA HYDROXY ACIDS		
	HYDROXY ACETIC ACID - GLYCOLIC ACID(GA)	SUGAR CANE
	2-HYDROXYPROPIONIC ACID-LACTIC ACID(LA)	SOUR MILK
	MONOHYDROXYSUCCINIC ACID-MALIC ACID	APPLES
	DIHYDROXYSUCCINIC ACID TARTARIC ACID	GRAPES
	CITRIC ACID	CITRUS FOODS
2. BETA HYDROXY ACIDS		
	SALICYLIC ACIDS	WILLOW BARK,WINTERGREEN LEAVES,SWEET BIRCH
3. ALPHA KETO ACIDS		
	PYRUVIC ACID	
4. TRICHOLOROACETIC ACID		
5. RETINOIC ACID		
6. RESORCINOL		
7. PHENOL		

INDICATIONS OF CHEMICAL PEELS

Pigmentary disorders • Post inflammatory hyperpigmentation • Freckles • Lentigines • Facial melanoses • Melasma Acne • Acne vulgaris -mild to moderately severe acne • Comedonal acne • Post acne pigmentation • Superficial acne scars • Acne excoriee	Aesthetic • Photoaging • Fine superficial wrinkling • Dilated pores • Superficial scars Epidermal growths • Seborrheic keratoses • Actinic keratoses • Warts • Milia • Sebaceous hyperplasia • Dermatoses papulosa nigra

BASED ON HISTOLOGICAL DEPTH OF NECROSIS OF SKIN



BRODY'S CLASSIFICATION

A) Superficial

1. Very light (stratum granulosum)
   TCA 10-20%, GA 20-35%, SA 10-30%, Jessners solution, resorcinol paste
2. Light (papillary dermis)
   TCA 20-35%, GA 35-70%, SA 30%, resorcinol paste

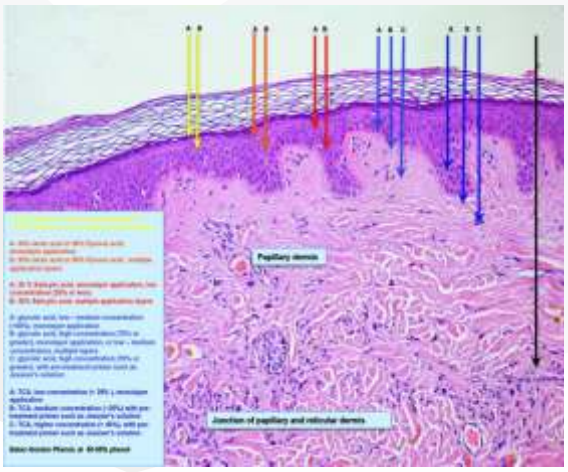
B) Intermediate (upper reticular dermis)

TCA 50%, phenol 88%, SA 50%
Combination: (CO_2 snow/Jessners) + (TCA 35% -50%)

C) Deep (mid reticular dermis)

TCA 50-70%, occluded/unoccluded
Baker's phenol- occluded/unoccluded

MARK RUBIN'S CLASSIFICATION



FACTORS AFFECTING THE DEPTH OF PEEL:

- ❖ Priming in the weeks preceding the peel
- ❖ Cleaning and degreasing before the peel
- ❖ Type of patients' skin
- ❖ The peeling agent and its concentration
- ❖ Number of coats of the agent
- ❖ Technique of application
- ❖ Duration of contact with the skin
- ❖ Altered skin surface (hypertrophic, atrophic)

MECHANISM OF ACTION:

- Chemical peeling is a process of causing controlled chemical burns and destruction of upper layers of the skin.
- This usually produces a partial thickness wound that heals by secondary intention.
- The end result is thinning of stratum corneum, regulation of epidermal thickness, laying down of new collagen and ground substance in the dermis.

STAGES:

- Coagulation and precipitation of proteins leading to necrosis, degeneration and destruction of epidermis and dermis
- Re- epithelialization
- Granulation tissue formation
- Angiogenesis
- Collagen and matrix remodeling

History to be taken prior to a peel:

- Recurrent Herpes Simplex infection
- H/o recent waxing/OTC creams, hair removal creams/home remedies-caustic agents
- History of any PIH/scarring for deeper peels
- In Females ask if pregnant/lactating
- Duration and intensity of sun exposure and lifestyle, H/o Photosensitizing Drug
- H/o of oral warfarin therapy for deeper peels
- H/o Heavy smoking
- Detailed cardiac/renal/hepatic history must be taken esp. for Phenol peels

Step:

A) Selection of depth of peel

B) Priming

- This can be achieved by the use of certain topical drugs at least 2 weeks prior to the planned day of peel. In case of melasma, 4 weeks of priming is essential.

1. Topical retinoids : tretinoin or retinoic acid cream (0.025%), adapalene (0.1%) and tazarotene (0.1%). Retinoids have to be withdrawn a week before peels, as they increase the irritation potential.
2. Tyrosinase blocking agents like hydroquinone (2% or 4% cream), kojic acid (2% cream) and azelaic acid (20% cream) : Stopped one day before peels and resumed a day after for superficial peels.
3. Glycolic acid : Started atleast 2-6 weeks before peels and stopped a week before and reintroduced 2 days post procedure.

C) Test peel : Small 1 inch circular or square area in the post auricular area is subjected to test peel.

Patients should be instructed to avoid waxing, electrolysis and dermabrasion for a minimum of 3–4 weeks prior to chemical peeling

REAGENTS:

- Correctly labeled peeling agents in various concentrations
- Alcohol to clean the skin
- Acetone to degrease the skin
- Cold water
- Syringes filled with normal saline for irrigation of the eyes, in case of accidental spillage
- Neutralizing solutions: Specific neutralizers are used for different peels

EQUIPMENTS:

- Glass cup in which the required agent is poured
- Head band or cap for the patient
- Gloves
- Cotton-tipped applicators or swab sticks
- 2" x 2" cotton gauze pieces
- Fan for cooling
- Timer for alpha-hydroxy acid peels

RECOMMENDATION:

- Anesthesia-not required in superficial and medium depth peels.
- Mild tranquilizers or anxiolytics may be used.
- Very superficial peels may be repeated every 1-2 weeks and superficial peels every 2-4 weeks.
- In patients with H/o herpes simplex posted for medium depth and deep peels, antiviral therapy with acyclovir or famciclovir is recommended, beginning 2 days prior to the procedure and continued for 7-10 days until complete reepithelialization.
- In case of H/o usage of isotretinoin : task force recommendation : superficial and medium depth peels are safe
- The clinician should remove any crystals that have formed in the solution as these may increase the concentration of the solution that is applied.
- In case of inadvertent spillage, neutralising agents and eye irrigation solutions such as water, saline or glycerine must be readily available.

Skin preparation before peeling

- The patient is asked to wash the face with soap and water
- The hair is pulled back with a hair band or cap
- The head should be elevated to 45°with the eyes closed
- Using 2" x 2" gauze pieces, the skin is cleaned with alcohol and then degreased with acetone
- The label on the bottle must be checked before applying the peel
- To avoid accidental spillage, the open bottle or the soaked applicator should not be passed over the face.

Procedure for Superficial Peels

Basic cosmetic subunits are divided by the solid blue lines into forehead (including temples and glabellar area), periorbital area, nose, cheeks, perioral area, and mentum. Danger zones are demarcated by the solid red circles and include the medial canthi and the nasojugal grooves. Special care should be taken to protect these areas (i.e. with petrolatum jelly and cotton balls or gauze pads) as the caustic agents used during peeling tend to pool in these concavities and can cause undesired excessive keratocoagulation.

In general, chemical peels should be performed craniocaudally, starting with the forehead, and proceeding inferiorly.

- The peeling agent is then applied either with a brush or cotton-tipped applicator or gauze.
- Feathering strokes are applied at the edges to blend with surrounding skin and prevent demarcation lines

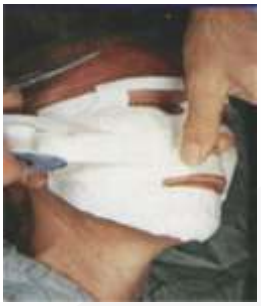
- For glycolic acid peels, the peel is neutralized after the predetermined duration of time (usually three minutes)
- However, if erythema or epidermolysis occurs, seen as grayish white appearance of the epidermis or small blisters, the peel must be neutralized immediately, irrespective of the duration. Neutralization is done with 10-15% sodium bicarbonate solution or neutralizing lotion and then, washed off with water
- For TCA peels, the end-point is frosting, and neutralization is either with a neutralizing agent or cold water, starting from the eyelids and then the entire face
- When salicylic acid peel is applied, it crystallizes forming a pseudo-frost; generally, 1-3 coats are applied to get an even frost. It is then washed with water after 3-5 minutes, after the burning subsides
- Jessners solution is applied in 1-3 coats to get even frosting; the endpoint is erythema or even frosting
- A cooling fan helps to reduce burning of the skin
- The skin is gently dried with gauze and the patient is asked to wash with cold water until the burning subsides
- The face is patted dry; rubbing should be avoided

Post procedure Care:

- In the post peel period, edema, erythema and desquamation occur. In superficial peels, this lasts for 1-3 days, whereas in deeper peels, it lasts for 5-10 days.
- Immediately post procedure : ice compresses are used to reduce discomfort
- Mild soap or a non-soap cleanser may be used
- Excessive sun exposure should be avoided. Use of sunscreens to prevent erythema and PIH.
- If there is desquamation, a non-occlusive water based moisturizer maybe used.
- If crusting, a topical antibacterial ointment can be given.
- Patient needs to be advised against getting into chlorinated water for at least 72hours to prevent PIH.

Medium Depth and Deep Peels

- Great caution in dark skinned patients : high risk of prolonged hyperpigmentation
- Most common : 70% glycolic acid and 35 to 50% TCA, with or without adjuvants. With the advent and rapid improvements in lasers, deep peeling has fallen out of favour in recent years.
- Usually with mild pre-op sedation and NSAIDs.



Recommended to leave 2 to 3mm of lid margin as a safety zone to prevent solution from entering into the eyes.

- Achievement of Level II to III frosting is the goal.
- Two methods of application: occluded and unoccluded.
- Occluded method : occlusive waterproof dressing (petroleum jelly dressing may also be used) over the treatment area immediately following application of the solution, thus achieving maximum penetration of the phenol acid.
- Unoccluded method involves more skin cleansing, lipid removal, as well as application of more peel solution.

Tape Occlusion method

- It is important to note that neutralization of any acid with any base is exothermic; thus, during neutralization, patients might experience a transient increase in feeling of warmth, burning, or stinging of the treatment area.

- Following a deep-peel procedure, dark, dusky oedematous erythema that will evolve into full-thickness epidermal necrosis with serosanguinous exudate, crusting, and sterile pyoderma within 24 to 48 hours. Inflammation might be severe, eyes might shut.
- For the first 24 hours, NSAIDs, soaks with dilute bleach or vinegar, and cool compresses with ice packs are useful in ameliorating the immediate postoperative swelling and pain.
- A bland emollient or mupirocin ointment should be applied to all treated areas for the first 24 hours post-treatment, and daily after that.
- For medium peels, by 3rd-4th day skin darkens. Exfoliation is complete within 10 to 14 days. With deep chemical peels, reepithelialization does not commence until Day 3 or 4 post-procedure and continues for 14 days or longer.

  Phenol is highly arrhythmogenic, any patient with a history of cardiac arrhythmia and/or hepatic or renal dysfunction should not undergo phenol peeling.

COMBINATIONS WITH PROCEDURES:

Two procedures can also be combined to blend cosmetic units and avoid demarcation lines

- Chemical peeling combined with dermabrasion abrades the stratum corneum allowing for increased penetration of the chemical peel.
- Chemical peeling can also be combined with laser resurfacing for skin rejuvenation. First, a chemical peel is performed and then, the deeper wrinkles in the periorbital and perioral areas are treated with pulsed CO 2 laser
- Chemical peeling with Botox : BTX-A injections may be performed at the same time as a superficial peel, but are best performed a week before medium-depth and deep chemical peels.
- Chemical peeling with fillers : Soft tissue augmentation with hyaluronic acid may also be combined with superficial chemical peeling. However, non-hyaluronic fillers in conjunction with concurrent medium or deep chemical peels carries a theoretical risk of biofilm formation and should be discouraged.
- Chemical peeling with Micro needling : results in the formation of microchannels **and a** demarcation current that stimulates the release of growth factors that are involved in neocollagenesis and neoangiogenesis.

IMMEDIATE COMPLICATIONS

- Pain/ burning sensation / pruritis /erythema
- Epidermal/dermal burns
- Ocular injuries

OTHERS

- Salicylism
- Phenol toxicity
- Resorcinism

DELAYED COMPLICATIONS

1. Hyperpigmentation/ hypopigmentation
2. Persistent erythema- Erythema persisting for > 3 wee ks after a peel, is indicative of early scarring and should be treated with potent topical corticosteroids for 2 weeks
3. Herpes simplex /bacterial / fungal infection
4. Acneiform eruption
5. Milia
6. Scarring
7. Demarcation lines
8. Systemic toxicity

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BRAIN TEASERS

Spot me out:

1. ***Which of the following injectable fillers is most likely to produce a lip nodule?***
   1. Poly-L-lactic acid
   2. Human collagen
   3. Hyaluronic acid
   4. Human fibroblasts5. Calcium hydroxyl apatite

2. ***The use of EMLA cream is contraindicated in patients with which of the following?***
   1. Atopic dermatitis
   2. Deomycin allergy
   3. Sickle cell anemia
   4. Methemoglobinemia
   5. Peripheral neuropathy

3. ***Post-operatively, one of your surgical patients notices numbness of the inferior two-thirds of the ear. Which nerve may have been injured?***
   1. Great auricular nerve
   2. Lesser occipital nerve
   3. Auriculotemporal nerve
   4. Facial nerve
   5. Glossopharyngeal nerve

4. ***A 35 year-old woman comes to your office for treatment of melasma. She has tried topical creams with minimal improvement and you recommend a chemical peel. Which of the following does require neutralization?***
   1. Jessner's
   2. TCA
   3. Salicylic acid
   4. Glycolic acid
   5. Baker-Gordon peel

5. ***In the 60-degree z-plasty technique, the length of the scar length is increased by what percentage?***
   1. 25%
   2. 35%
   3. 50%
   4. 75%
   5. 90%

6. ***Reticulate eythema is a side effect seen with which treatment?***
   1. Mesotherapy
   2. Sclerotherapy
   3. Diode laser
   4. Cryotherapy
   5. Pulsed dye laser

7. ***Which of the following determines the wavelength of a laser?***
   1. Fluence
   2. Q switch
   3. Medium
   4. Spot size
   5. Pulse duration

8. ***In a patient who is allergic to paraphenylinediamine, which of the following anesthetics should be avoided?***
   1. Bupivicaine
   2. Etidocaine
   3. Mepivicaine
   4. Prilocaine
   5. Benzocaine

9. ***Which of the following has been implicated in the promotion of skin aging?***
   1. alpha-tocopherol
   2. homocysteine
   3. proanthocyanidin
   4. beta carotene
   5. alpha-lipoic acid

10. ***What is the ratio of sodium bicarbonate to 1% lidocaine in a buffered lidocaine solution?***
    1. 1:1
    2. 1:2
    3. 1:5
    4. 1:10
    5. 1:25

11. ***The antiptosis subdermal suspension threads used in facial rejuvenation are composed of:***
    1. Poly-L-lactic acid
    2. Polyglactin
    3. Polypropylene
    4. Polydioxanone
    5. Polyglycolic acid

12. ***Which of the following sutures is best used for mucous membranes?***
    1. Catgut
    2. Silk
    3. Polyglactin 910
    4. Nylon
    5. Polydioxanone

13. ***Which of the following lasers has the greatest depth of penetration into the skin?***
    1. Pulsed dye
    2. KTP
    3. Nd:YAG
    4. Co2
    5. Erbium

14. ***How long after cutaneous infiltration of lidocaine with epinephrine is maximal vasoconstriction achieved?***
    1. 1 minute
    2. 7 minutes
    3. 15 minutes
    4. 30 minutes
    5. 1 hour

15. ***A patient is scheduled for liposuction on the hips, buttocks, knees, arms, and back. In which body part can compartment syndrome occur after liposuction?***
    1. hips
    2. buttocks
    3. knees
    4. arms
    5. back

16. ***A 22 year old male patient is developing early androgenetic alopecia. He is seen for hair transplant consultation. How should you counsel this patient?***
    1. He can be scheduled for hair transplantation since he is over age 21
    2. Patients younger than 25 are not preferred for hair transplantation
    3. Finasteride can help because 5 alpha reductase activity is lower in areas of balding
    4. Transplanted hairs are not permanent and hair loss will continue in the transplanted hairs as well
    5. Patients with scarring alopecia cannot receive hair transplantation

17. ***The cosmetic subunits are designated based upon their similarity in all of the following except:***
    1. Texture
    2. Color
    3. Sebaceous features
    4. Hair density

18. ***Eccrine features***
    1. What is the mechanism of action of Onabotulinumtoxin-A? 1. Inhibits exocytosis of pre-synaptic epinephrine
    2. Inhibits endocytosis of post-synaptic epinephrine
    3. Inhibits exocytosis of pre-synaptic acetylcholine
    4. Inhibits endocytosis of post-synaptic acetylcholine
    5. Increases synaptic breakdown of acetylcholine

19. ***Which of the following cosmetic injectables can be seen on routine dental x-rays?***
    1. Botox
    2. Zyplast
    3. Radiesse
    4. Cosmoderm
    5. Restylane

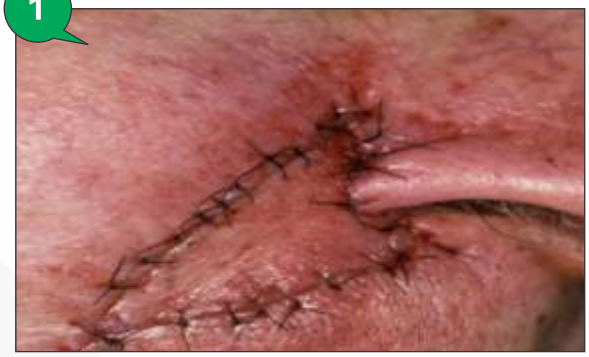
20. ***The tissue temperature required for destruction of basal cell or squamous cell skin cancers with cryotherapy:***
    1. -40 to -50 C
    2. 0 to -10 C
    3. 10 to 20 C
    4. -60 to- 70 C
    5. -10 to -20 C

Match the Catch

1. Shaw scalpel	A. Half-buried horizontal mattress suture
2. Full thickness skin graft	B. Salicylic acid
3. Alpha hydroxy acid	C. Electro cautery
4. Tip stitch	D. Necrosis
5. Pulley suture	E. Tartaric acid
6. Jessner's peel	F. Modified vertical mattress

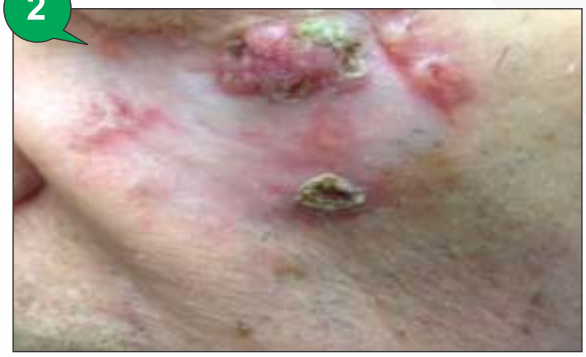
Photo Quiz

1



Identify the type of flap repair

2



The patient declines surgical intervention for this cutaneous neoplasm and a decision is made to pursue medical therapy. Which FDA-approved medication should be prescribed for this neoplasm?

3

According to the information provided, the glasses shown provide protection for which laser type?

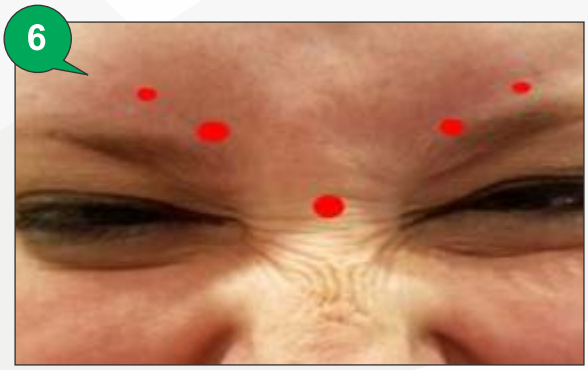
4

The anatomic structure identified in the photograph is called the:

5

What structure is being lifted by the dissecting probe?

6



After treating this patient with Onabotulinumtoxin-A, they return to clinic complaining of their right upper eyelid drooping and intefering with their vision. What is the mechanism of action of the medicated eye drops which has been shown to be beneficial when this adverse effect occurs?

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Ear-piercing Techniques

Ear piercing is one of the most commonly practiced aesthetic procedures in our country, as a religious and cultural tradition too. It is practiced from the most basic goldsmiths to plastic surgeons & dermatologists. Doctors are many times requested to pierce a virgin ear lobule, after repair of split ear or a post traumatic avulsed lobule or following keloidal excision. Also with an increasing trend of multiple earrings, cartilage piercing is also become very popular. The stent used for patency of the hole created also varies from using just neem twigs to gold wire or plastic stud or the earring of choice. The importance of proper technique and using sterile stents lies in preventing infections and other complications with this procedure.We would like to highlight some of the simple and efficient techniques ear-piercing which when practiced correctly increases the patient and doctor satisfaction rate. Essential prerequisite to any technique is ink marking the exact desired site of piercing making sure its symmetry.

Techniques:

1) Traditional methods of ear piercing using wire involved two stages. The wire technique which necessitates serial dilatation of the tract until the suitably sized ear stud can be placed is a painful process.
2) Piercing gun used by jewelers didn't gain much acceptance among the professionals as they believed it makes ear prone for infection.(1)
3) Under infiltrating local anesthetic agent (2% lignocaine with 1:200,000 adrenaline), an 18 gauge (1.3mm)IV cannula is inserted into lobule to create a hole. The stiletto of intracath is withdrawn gradually, leaving the plastic cannula in situ. The distal 1 cm of plastic cannula adjacent to the pierced ear is cut from remaining part of cannula and the injection port. A thick silk or prolene suture (1-0) is passed through lumen of cannula tube, and a knot is secured to keep tube in its place. The tube is removed after few weeks, till then the tract gets epithelized. (Figure 1) Thus, this is a sterile, fast, safe, easy, and reliable technique for ear piercing.

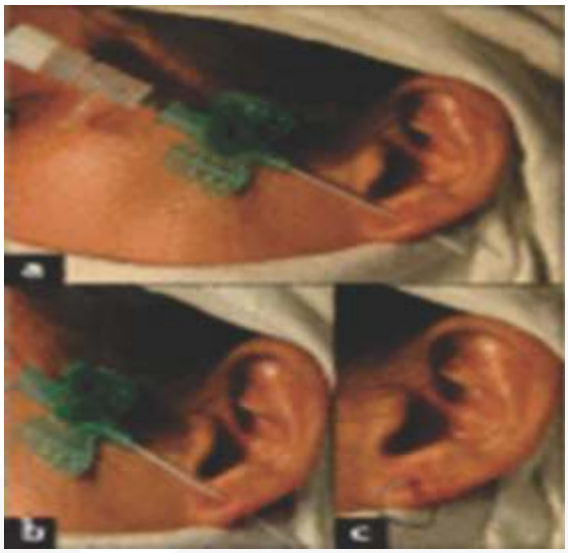

Figure 1 (a) Intracath inserted into lobule. (b) Stellate withdrawal and thread inserted. (c) Thread tied across plastic cannula

4) Van Wijk et al techniqueis similar, but used a 16 G (1.7mm outer diameter) cannula.
5) Rail road technique where in a 26 G needle was used to administer local anesthesia and the same needle was then brought out posteriorly. Then, an 18 G needle was rail roaded over it from posterior to anterior withdrawing the previous needle. Now, the ear stud was guided along the tip of the needle, which was slowly withdrawn backwards. (3)

6) A 30-gauge needle attached to a syringe filled with 1% lidocaine is inserted into the lobe at the site of the mark. The needle is slowly advanced while the anesthetic is infiltrated in a plane perpendicular to the lobe and directed posteriorly or slightly inferiorly so that the earring does not droop (Figure 1). After the 30-gauge needle is inserted through the lobe, a 16-gauge needle is slipped over the 30-gauge needle. With a gentle twisting and pushing motion, the 16-gauge needle–30-gauge needle unit is advanced anteriorly through the lobe. The 30-gauge needle is then withdrawn from the 16-gauge needle. The patient's earring is placed into the barrel of the 16-gauge needle and advanced posteriorly while the 16-gauge needle is slowly withdrawn. The 16-gauge needle is removed and the clasp is placed on the earring pin.(4)

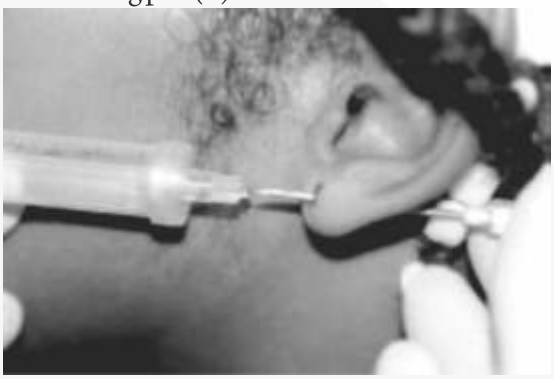

Figure 2

7) The CO2 laser has been used for ear piercing by Chang et al. in 2010.(5)

8) Diode laser was first used in dental practice. The electric current is the pump source which produces photons which are conducted through a laser active medium. It works on three wavelengths, 810, 940 and 980 nm. Topical local anesthesia combined with various pre-cooling methods used in conventional laser therapy such as cold gel application and cryospray application. This avoids the need for an injection before the procedure and can be useful in children. The laser scalpel instantly ablates the tissues it cuts causing excellent hemostasis. In the ear, where there is rich blood supply and bleeding is a common problem, the use of laser scalpel for piercing holds this excellent advantage. There is instant sterilization of the wound and reduced bacteremia. This causes very minimal chances of post-operative perichondritis or wound infection reducing the chance for keloid formation.(1,6)

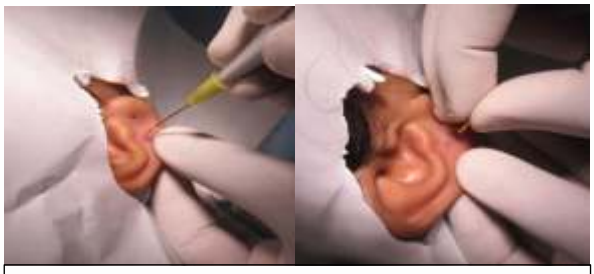

Figure 3a Figure 3b

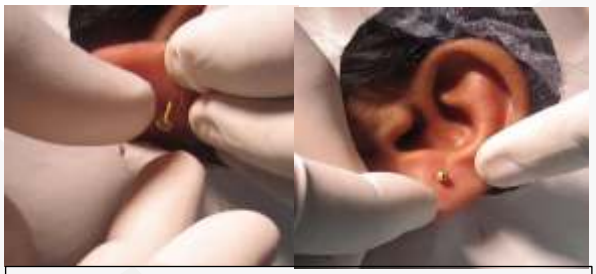

Figure 3c Figure 3d

Figure 3a: Applying diode laser and making the tract from anterior to posterior direction. Figure 3b: Golden ear studs being inserted through the tract with accuracy and hemostasis. Figure 3c: Screw is tightened to the stud with proper visibility. Figure 3d: Ear stud in place, at the exact place marked pre-operatively

9) After ensuring adequate anesthesia a monopolar radiofrequency probe with a sterile pointed tip needle electrode was used to pierce the ear at the desired point. The radiofrequency unit is set on a cutting and coagulation (rectified) mode with a

power dial of 2A 18G needle was threaded over the radiofrequency electrode and brought out anteriorly from behind the ear. The earring was secured over the tip of the 18G needle and pulled into the track created while withdrawing the needle.(7)

We practice, **TWO NEEDLE OR RAIL ROAD TRACK TECHNIQUE USING:** 18G and 21G needle to guide the earring threw it.

POST-PIERCING CARE:

- Always wash your hands before touching newly pierced ears.
- Leave the earrings in your ears for six weeks or more, even at night.
- Regularly wash your ears with soap and water.
- Twist the earrings a few times daily.

COMPLICATIONS:

- Immediate- Pain, edema & cartilage damage-Perichondritis
- Infection
- Keloids

REFERENCES:

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Answers

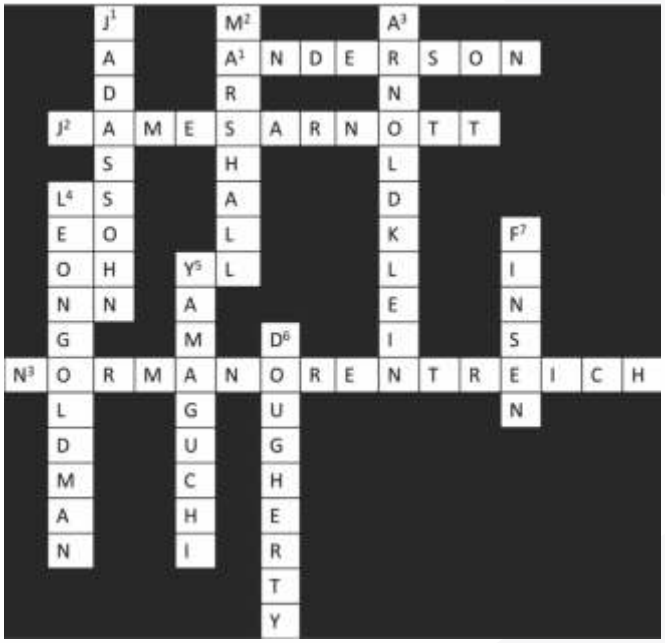
Crossword - `Fathers In Dermatology´

VERTICAL

1. FATHER OF PATCH TEST: JADASSOHN
2. FATHER OF ELECTROCAUTERY: MARSHALL
3. FATHER OF BOTOX: ARNOLD KLEIN
4. FATHER OF LASERS: LEON GOLDMAN
5. FATHER OF CRYOTHERAPY: YAMAGUCHI
6. FATHER OF PHOTODYNAMIC THERAPY: DOUGHERTY
7. FATHER OF PHOTOTHERAPY: FINSEN

HORIZONTAL

1. FATHER OF GENE THERAPY: ANDERSON
2. FATHER OF CRYOSURGERY: JAMES ARNOTT
3. FATHER OF HAIR TRANSPLANTATION: NORMAN ORENTREICH



Spot Me Out :

1. Calcium hydroxyl apatite
2. Methemoglobinemia
3. Great auricular nerve
4. Glycolic acid
5. 75%
6. Diode laser
7. Medium
8. Benzocaine
9. Homocysteine
10. 1:10
11. Polypropylene
12. Silk
13. Nd:YAG
14. 15 minutes
15. Patients younger than 25 are not preferred for hair transplantation
16. Arms
17. Eccrine features
18. Inhibits exocytosis of pre-synaptic acetylcholine
19. Radiesse
20. -40 to -50 C

Match the Catch :

1. Shaw scalpel- Electrocauery
2. Full thickness skin graft- necrosis
3. alpha hydroxy acid- Tartaric acid
4. Tip stitch- Half-buried horizontal mattress suture
5. Pulley suture- modified vertical mattress
6. Jessner's peel- Salicylic scid

Photo quiz:

1. Island pedicle flap
2. Vismodegib
3. Nd:YAG 1064nm
4. Angular artery
5. Philtral ridge
6. Alpha agonist which results in contraction of the superior tarsal muscle

WINNER

IADVL theme essay competition 2019
Organised by National Resident Connect Committee 2019

Fight The Topical Steroid Misuse

"The mother of excess is not joy but joylessness."
– Friedrich Nietzsche

"Too much of anything could destroy you, too much darkness could kill, but too much light could blind."
– Cassandra Clare, City of Lost Souls

Use, do not abuse... neither abstinence nor excess ever renders man happy. I do offer warning; Even a good thing can become destructive if taken to excess. "Chanakya" says "Everything in excess acts like poison" and same is applicable for topical steroids also. Craze for fairness of skin has reached an epidemic level. Up till now, females were craving for fairness. At present, even males have also joined the bandwagon! Abuse of topical steroids has increased alarmingly, in the pursuit of becoming a few shades fairer, you may be inviting serious side-effects and potentially grave infections, topical medications which contain a "cocktail of harmful steroids" are increasingly becoming a popular source of attaining fairness egged on by societal pressure where fairness is widely believed to be a ticket for success in personal life, and, sometimes even social mobility, topical steroids account for 82% of sale of all topical drugs in India. In fact such has been their misuse, that the government has classified all steroids for topical external application (ester, salt, preparation) under Schedule H of Drugs and Cosmetic Rules 1945, the category of drugs which need to be dispensed only through a prescription (not over the counter).

The renaissance period of dermato - pharmacology was initiated by Sulzberger and Witten in 1952 when topical corticosteroids (TC) were first introduced as marketable commodities. It has made a dramatic contribution to dermatology since the introduction of "compound F" or hydrocortisone and has become the mainstay of dermatologic treatment of a wide range of inflammatory and non-infectious conditions. Topical corticosteroids are the backbone of the dermatology therapeutic armamentarium. The clinical effects are mediated by their anti-inflammatory, vasoconstrictive, anti-proliferative and immunosuppressive properties. They were hailed as a panacea for all ills by physicians and patients and gained rapid popularity.

Rampant & injudicious use has lead to a lot of side effects and topical steroid dependence. Adverse effects of topical steroids on skin are- skin atrophy, telangiectasia, striae, purpura, stellate pseudoscars, easy bruisability, rosacea, acneiform eruption, hirsutism, perioral dermatitis, infections, hyperpigmentation, hypopigmentation, tinea incognito, tachyphylaxis, rebound phenomenon etc. In addition to local side effects, prolonged use of topical steroids can cause systemic side effects which are less common than those due to systemic corticosteroids. These occur especially in infants and elderly patients. The documented adverse effects are:

- Suppression of the hypothalamic-pituitary-adrenal axis
- Iatrogenic Cushing's syndrome
- Growth retardation in infants and children
- Ocular: Glaucoma and loss of vision
- Avascular necrosis of femoral head

Misuse of TC may occur at various stages during its journey from the factory to the face-

1-Manufacturing misuse

2-Marketing misuse

3-Prescription misuse

4-Sales misuse

5-Misuse by lay persons

Skit performed by me for awareness of general public regarding steroid misuse in front of historical BT station in Mumbai.

For reasons unknown, the government agencies responsible for regulating the use of drugs, such as corticosteroids, have failed miserably in discharging their duties. The problem worsened when a number of pharmaceutical companies started running advertisements of corticosteroid creams in print and electronic media. Realizing the imminent danger to the health of people at large, dermatology association of India, i.e., IADVL was forced to take counter steps in this direction. A special Task Force titled IADVL Task force Against Topical Steroid Abuse (ITASTA) has been constituted. Most of members have taken pledge to fight this menace by minimizing use of these cocktail steroid combinations-

1) To increase awareness among General Practitioners and to motivate and facilitate them in discontinuing their indiscriminate prescriptions.
2) To minimize and avoid manufacture, sales and promotion of irrational steroid based cocktail combinations.
3) To avoid and discourage organizing camps where samples of such preparations are dispensed free.
4) To educate your retail vendors to avoid dispensing such potentially harmful preparations without valid prescriptions.
5) To limit potent steroid promotion only to dermatologists.
6) Avoid promoting these products to alternative medical practitioners.
7) Helping us in preparing health education posters, pamphlets and videos- such posters need to be put up in all medical shops and in clinics.
8) Insert an advisory in bold letters on all tubes that it is meant for prescription by dermatologist only.
9) Insert a special advisory in all drug brochures in the tubes on the side effects of this menace- we can help you in preparing such advisory.

CONCLUSION:-

Topical steroids are very important and efficacious Drugs. However, the misuse of topical corticosteroids is a hydra-headed problem that needs multi-dimensional interventions, involving educational, legal and managerial approaches to overcome it. Education of the general public through media programs and introduction of continuing medical education programs for medical, paramedical personnel and pharmacists are probably the most important steps to be taken to create awareness about the hazards of misuse of topical corticosteroids. Secondly, legal approaches should include the enforcement of the existing legislation that potent topical corticosteroids cannot be sold over-the-counter and without the prescription of a qualified doctor, strict implementation of the existing regulations is the need of the hour to prevent their widespread abuse. Indian drug regulatory agency has to take proactive steps to ensure the availability of only approved FDCs in the country. Along with this, a robust surveillance mechanism, to look out for any irregularities in implantation of approved guidelines, will go a long way to ensure safety of the patients. A coordinated approach among all the stakeholders, viz. drug regulator, physicians, pharmacists and patients is vital to prevent misuse of TCs. We should also take up the matter with Advertising council of India so that the products containing topical steroids in different so called over the counter products must be stopped to safe guard the public interest. But the movement against misuse of TCs is still in its infancy and needs to be made more effective.

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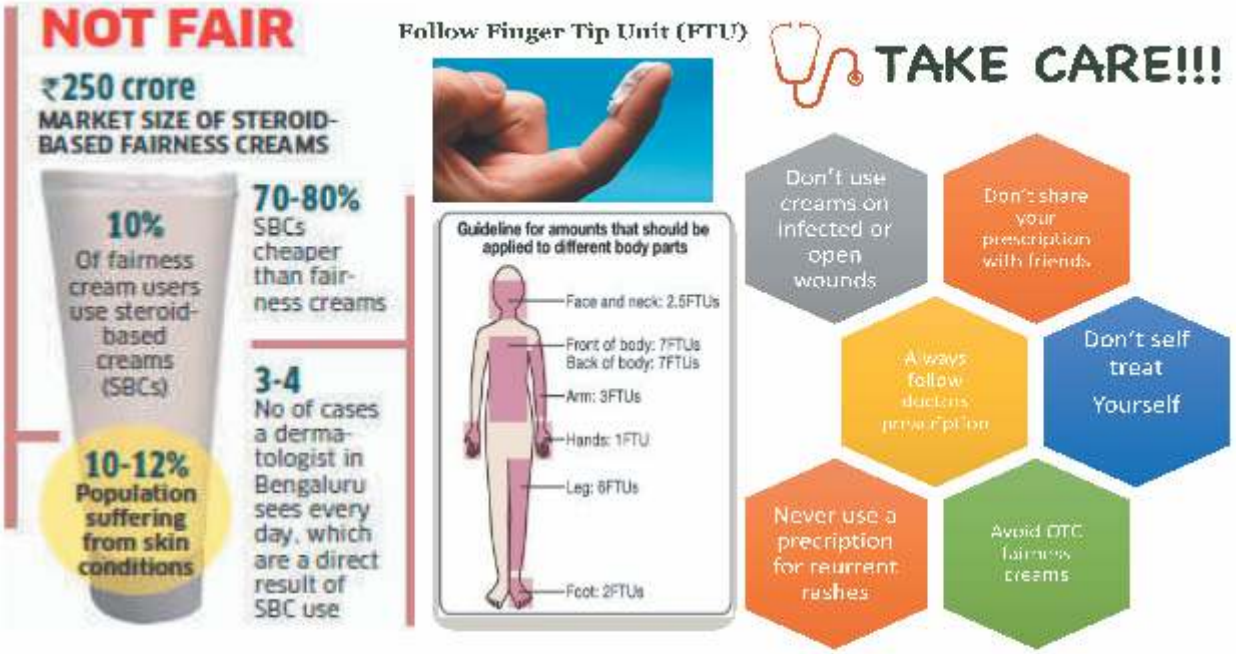

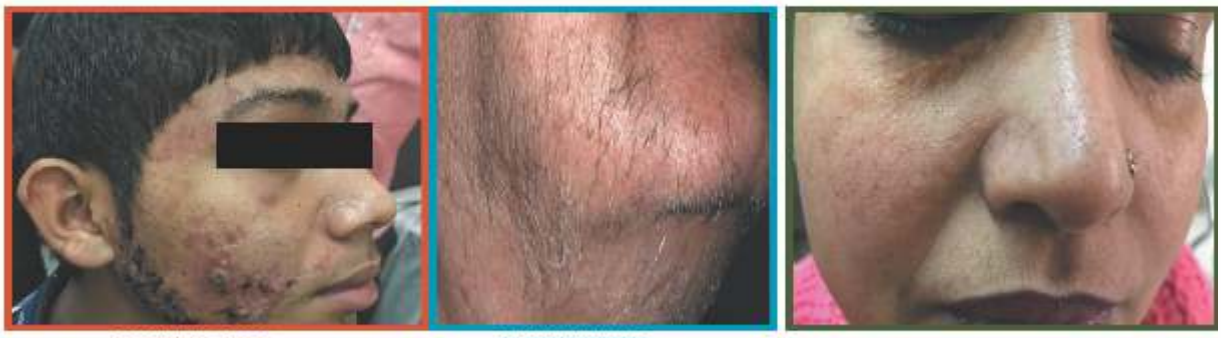

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Choose before you use...
Beware STEROID misuse

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feedback

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Regards,
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