



IADVL

IADVL SIG Pigmentary (IADVL Academy) Newsletter

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INDIAN ASSOCIATION OF DERMATOLOGISTS
VERNERELOGISTS AND LEPROLOGISTS

AWARENESS, SUPPORT & TREATMENT A UNITED FIGHT AGAINST VITILIGO

Vitiligo! Let's play!

World Vitiligo Day
June 25th



Vitiligo is a disease where the body's immune cells attack and destroy pigment-bearing cells of the skin.

It does not spread from one person to another.

Early treatment may prevent its progression to larger areas of the body.

There are various treatments available like creams, tablets, light therapy, surgery.

These treatments are relatively safe if you follow your doctor's advice.

The combination of treatments varies from person to person based on severity of disease and other factors.

You are unique and your skin is beautiful ! Treatment is not essential but assessment surely is ! Your doctor needs to ensure that you have no associated diseases and you can wear your skin with pride !

Dr. Cassia Zuleira

Sri Ramachandra Institute Of Higher Education and Research

Preface



Dr. Jayadev Betkerur
IADV President 2021

Colour of skin has an immense effect on the social well being of an individual. Everyone strives to have an even colour of our skin be it dark or fair. Any alteration in it is a cause for worry.

There are multitude causes for alteration in the colour of skin, both hypopigmentation and hyperpigmentation. Of the two, hypopigmentation of skin, more so in skin of colour, are more varied. Most of these are easy to diagnose and treat. However some pose serious challenges to the treating Dermatologist especially in the management of the disease. The sufferer has to face the diagnosis and the psychosocial consequences of the same. The social stigma attached to some of these diseases like Leprosy and Vitiligo is tremendous.

Hence it is pertinent for us to discuss these disorders of hypopigmentation. The approach to identify the disorder, to treat the disease and allay the apprehension and counselling using appropriate tools is very important.

A news letter “Compendium of Hypopigmentary Diseases” by SIG Pigmentary Disorders will be of immense help to refresh our understanding of these diseases. The articles by well read authors will be concentrating on diagnosis, management and psychosocial aspects of various disorders of hypopigmentation. I am sure the news letter will make an interesting read to all of us. I eagerly look forward to have it on my desktop at the earliest.

Best wishes

A handwritten signature in blue ink, appearing to read 'Jayadev Betkerur', with a horizontal line underneath.

VITILIGO - PATIENTS PERSPECTIVE

Sushamita Jain

Founder

Vitiligo Support Group

1. Persistence of stigma in different parts of the country.
2. Problems faced by the patients at different levels in the society. (Below is the answer to both the questions)

This depends on various factors like the social strata, geography, and the support system of the person with Vitiligo. Generally, persons with Vitiligo face a lot of sympathy, stares, and uncomfortable comments. There is hesitation from people in terms of shaking hands, getting along, sharing food, etc. Youngsters with Vitiligo even face challenges in finding room for rents in some places. We have observed this more in rural and semi-urban areas while in Urban areas it prevails to a lesser extent compared to the former.

There have been multiple instances, where people faced challenges in maintaining customer-facing (e.g. at the reception) roles or switching between multiple businesses as a result of psychosocial stress/ stigma faced by them during their interactions with people during work. While on the other hand, self-advocacy or proper awareness towards the skin condition has led to normalizing any sort of stigma related to that in other instances.

Dermatologists from their end can sensitize/ spread awareness in their circles personally and professionally thus clarifying myths about the skin condition. On the other hand, while counseling persons with Vitiligo they can encourage them to be self-advocates and spread awareness on their own capacity as well. If the Government can release notification debunking myths, especially for the rural then the impact and stigma can be addressed to a major extent. As a response, we got to know that dermatologists had already requested the government to include Vitiligo under the non-communicable category (snapshot below). In addition, the suggestion was to spread Vitiligo awareness at higher levels and include voices of people working in senior positions for the government as well. The usage of the right language and representation of Vitiligo was also emphasized. Even awareness in schools and voluntary projects(focussing on Vitiligo) for students was proposed, as awareness at the initial level is very crucial.

3. Vitiligo in a female and problems faced pertaining to marriage

Vitiligo affects a person's self-esteem and leads to sympathy in many cases. It takes consistent and continuous effort to see ourselves in the same light as others without feeling that we are different, as it's natural to feel different due to these experiences and this might also happen with people without vitiligo as well due to various other reasons. We need to normalize perceptions regarding persons with Vitiligo marrying whomsoever they want to marry and avoid restricting marriage between people with the same skin condition only. Dermatologists can play an important role by speaking about real-life stories and facilitating a dialogue with adults with Vitiligo and their parents. Our website has a few real-life stories(Under www.supportvitiligo.org , Tiny Tales Section)

I have found that dermatologists generally emphasize on an open mindset. There have always been scenarios where we have seen persons with Vitiligo are married to a person without Vitiligo and it is in recent times that marriage between people with the same skin condition is happening. We also make it clear that if a person without Vitiligo marries a person with Vitiligo then in most cases the children do not get Vitiligo as around 85% of the cases do not have a possible family history and the possibility is quite low.

Pathogenesis

Serum level of antioxidant vitamins and minerals in patients with vitiligo, a systematic review and meta-analysis

Antioxidant status is an important factor in the pathogenesis of vitiligo. A systematic review of PubMed, EMBASE, Scopus, and Web of Science databases since inception up to 30 April 2020 was undertaken to assess the same. Finally, thirteen studies were included for systematic review, and eleven were included in the meta-analysis. There was no statistical difference between patients and controls with respect to serum vitamin C (OR = 1.17, P = 0.495), and vitamin E (OR = 0.61, P = 0.180) levels. Higher serum zinc was found to decrease the risk of vitiligo. (OR = 0.29, P < 0.001). On the other side, higher serum selenium level significantly increased the risk (OR = 4.31, P < 0.001). This was found with serum copper levels as well, which was significantly higher in patients (129 ± 33 vs 99 ± 19 $\mu\text{g}/100$ mL, P = 0.002).

Conclusion: Higher serum selenium (OR = 4.31) and lower zinc level (OR = 0.29) can increase the risk of vitiligo.

Decreased circulatory levels of Vitamin D in Vitiligo: a meta-analysis

A systematic review and meta-analysis of electronic databases was undertaken to compare the serum Vitamin D status in patients with vitiligo versus that of controls. Finally, 31 studies were included. Compared with controls, vitiligo patients showed significantly decreased serum Vitamin D levels (standardized mean difference = -1.03; p < 0.0001). The sub-group analysis showed that vitiligo patients with indoor/urban work had a significantly lower Vitamin D level when compared to their outdoor/rural counterparts (standardized mean differences = -0.45; p = 0.03). The sensitivity analysis suggested robustness of this meta-analysis.

Conclusions: This meta-analysis showed significantly decreased Vitamin D level in vitiligo, and its association with indoor/outdoor type of work of vitiligo patients. This study highlighted the need to assess Vitamin D status for improving its level in vitiligo.

Quality of life

Health-related quality of life in paediatric patients with vitiligo: a systematic review and meta-analysis

Vitiligo has a profound usually appears in childhood or adolescence, with 50% occurring before the age of 20. To date, there is a paucity of systematic reviews evaluating the impact of vitiligo on the QoL of paediatric patients. A literature search was conducted of the MEDLINE, PubMed, and Embase databases on 24 July 2020. Original research papers reporting health-related quality of life (HRQOL) in vitiligo patients under 20 were included. The search identified 362 articles, with one additional record obtained through cross-reference. Twenty studies were included in the systematic review, and three studies with 429 participants (using CDLQI) were included in the meta-analysis. Children and adolescents with vitiligo struggled most with self-consciousness and embarrassment (1.08, 95% CI 0.66-1.51) and teasing and bullying (0.86, 95% CI 0.26-1.45). Least affected domains were sleep (0.30, 95% CI 0.09-0.5) and school/holidays (0.43, 95% CI 0.22-0.64). Predictors of worse QoL included adolescent age, greater body surface area involvement, and facial involvement. Parents of affected children were found to have moderately reduced QoL and higher prevalence of depression and anxiety than parents of unaffected children. Clinicians should be aware of the parent/child dyad and their intricately linked QoL and seek to offer counselling to caregivers.

Conclusion

This study demonstrated the need for a pediatric vitiligo-specific QoL assessment tool.

Phototherapy

The effects of tacrolimus plus phototherapy in the treatment of vitiligo: a meta-analysis

A meta-analysis was conducted to compare the effects of tacrolimus plus phototherapy in the treatment of patients with vitiligo. PubMed, Embase, and Web of Science databases were searched and outcomes were graded as excellent response ($\geq 75\%$ repigmentation), good response (50-75% repigmentation), moderate response (25%-50% repigmentation), and poor response ($< 25\%$ repigmentation). Compared with phototherapy alone, combination treatment of tacrolimus and phototherapy significantly improved excellent response rate (RR = 1.40, 95% CI 1.16, 1.69; P < 0.001) and reduced the poor response rate (RR = 0.37, 95% CI 0.22, 0.61; P = 0.001). Both NB-UVB and excimer lamp, when added to tacrolimus, resulted in a significantly higher excellent response rate than when used alone. Age was a predictive factor for an excellent response, and children had a higher excellent response.

Conclusion: Combination treatment with tacrolimus and phototherapy was more effective than phototherapy monotherapy for patients with vitiligo, especially in the lesions located in the face and proximal limbs.

Surgery

Trichloroacetic Acid in Different Concentrations: A Promising Treatment Modality for Vitiligo

Despite the recent advances repigmentation is still unsatisfactory in vitiligo. This study was conducted to evaluate the efficacy and safety of TCA, in different concentrations, for the treatment of stable localized vitiligo. It was applied every 2 weeks until complete repigmentation or for a maximum of 6 treatment sessions. Follow-up was done every month for 6 months to detect any recurrence. Eyelid vitiligo showed the highest response to TCA treatment (excellent response in 80% of cases), followed by the face, trunk, and extremities. Lower response rates were noticed in the hands and feet vitiligo.

Conclusion: Trichloroacetic acid is a potential, cost-effective, well-tolerated therapeutic option for the treatment of vitiligo in the adults and pediatric populations.

References :

1. Huo J, Liu T, Huan Y, Li F, Wang R. Serum level of antioxidant vitamins and minerals in patients with vitiligo, a systematic review and meta-analysis. *J Trace Elem Med Biol.* 2020;62:126570.
2. Varikasuvu SR, Aloori S, Varshney S, Bhongir AV. Decreased circulatory levels of Vitamin D in Vitiligo: a meta-analysis. *An Bras Dermatol.* 2021;96(3):284-94.
3. Nathalie J, Chang J, Ezzedine K, Rodrigues M. Health-related quality of life in paediatric patients with vitiligo: a systematic review and meta-analysis. *J Eur Acad Dermatol Venereol.* 2021;35(11):e755-e6.
4. Dong Y, Yang Q, Guo B, Zhu J, Sun X. The effects of tacrolimus plus phototherapy in the treatment of vitiligo: a meta-analysis. *Arch Dermatol Res.* 2021;313(6):461-71.
5. Nofal A, Fawzy MM, Alakad R. Trichloroacetic Acid in Different Concentrations: A Promising Treatment Modality for Vitiligo. *Dermatol Surg.* 2021;47(2):e53-e7.

Summary of state CMEs conducted in collaboration with SIG pigmentary

Dr. Chethana S.G.
JSS Medical College.

IADVL SIG Pigmentary Disorders in collaboration with IADVL Maharashtra under the aegis of IADVL Academy presents.

“The Pigmentary Disorders CME” 02nd May 2021 (Sunday) 4 pm – 6:30 pm.

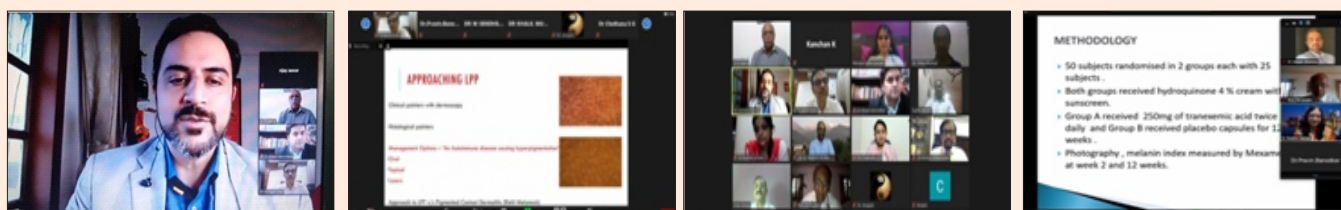
Scientific Programme Report

Dr K.E. Mukadam, President, IADVL Maharashtra and Dr Deepika Pandhi, Chairperson IADVL Academy opened the session and welcomed everyone. Dr Sendhil Kumaran, Coordinator, IADVL SIG Pigmentary disorders discussed the theme and the flow of the programme. Dr Pravin Banodkar was the master of ceremony. The lectures ensued followed by a panel discussion.

The esteemed chairpersons for the lectures were Dr Hema Jerajani and Dr Rui Fernandez, senior dermatologists from Mumbai, Maharashtra. Dr Rashmi Sarkar, IADVL President Elect spoke on the pathogenetic and management updates in Melasma. Dr Nilendu Sarma spoke about Facial Pigmentary Dermarcation Lines. Dr Vijay Zawar spoke on Exogenous Ochronosis and the challenges in diagnosis and treating the condition effectively. SIG member Dr Rashmi Sriram gave insights on managing Periorbital hyperpigmentation. The last lecture was on Drug induced Hyperpigmentation, delivered by Dr. Chethana S G.

The panel discussion was on “Approach to DDs of facial pigmentation: A case-based approach” which was chaired by Dr D.G. Saple and Dr Mukesh Shah, senior practitioners from IADVL Maharashtra state branch. The session was moderated by Dr Aseem Sharma, Secretary IADVL Maharashtra who welcomed the other panelists from the state branch – Dr Vidya Kharkar, Dr Sushil Pande and Dr Manjyot Gautam. The discussion was purely case based and practical, replete with tips from all panelists, following which audience questions were answered, the vote of thanks was delivered and the programme was closed.

The programme was accredited with 1 CME point by Maharashtra Medical Council vide MMC/WEB/2021/F-401321. The estimated live viewers for the event were 1852.



IADVL SIG Pigmentary Disorders in collaboration with IADVL West Bengal under the aegis of IADVL Academy presents.

“The Pigmentary Disorders CME” 20th June 2021 (Sunday) 5:30 pm – 8:30 pm

Scientific Programme Report

Dr Gangadhar Swarnakar, President, IADVL West Bengal opened the session and welcomed everyone. Dr Sendil Kumaran, Coordinator, IADVL SIG Pigmentary disorders discussed the theme and gave an introduction to SIG.

Dr Anupam Das was the master of ceremony and gave the introduction to the CME. The lectures ensued followed by a panel discussion.

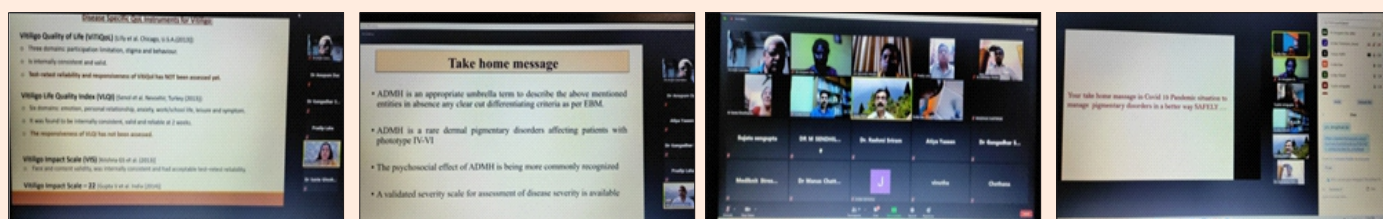
The esteemed chairpersons for the lectures were Dr Arjith Coondoo and Dr Santa Ghosh, senior dermatologists from Kolkata, West Bengal. Dr Athiya Yasmeen, SIG member spoke on the assessment of quality of life in pigmentation disorders. Dr M Sendhil Kumaran, Co ordinator of SIG gave a lecture on Acquired dermal macular hyperpigmentation: What's in a name. Dr Soumya Panda spoke on Childhood acanthosis nigricans and the challenges in treating the condition effectively.

The panel discussion was on “How to treat pigmentation disorders during COVID-19 pandemic” which was chaired by

Dr Pradip Laha and Dr Gautam Banerjee. The session was moderated by Dr Sanjay Rathi member of SIG, who welcomed the other panelists from the state branch – Dr Sudip Das, Dr Sujata Sengupta, Dr Sudip Ghosh, Dr Kingshuk Chatterjee and Dr . Tindrashis Podder. The discussion was purely case based and practical, followed with tips from all panelists, following which audience questions were answered.

The next talk was by Dr Chethana S G, member of SIG, on Management of difficult to treat areas in vitiligo: my experience. Dr Rashmi Sriram, member of SIG gave a lecture on Systemic causes of hyperpigmentation: An overveiw. This was followed by another talk by Dr Manas Chatterjee on Pigmentation disorders of the trunk: A Potpourri. Dr Vinutha R, member of SIG gave the last lecture on Mosaicism in pigmentation: connecting the link. Lastly the vote of thanks was delivered by Dr Arun Achar, Secretary, IADVL West Bengal and the programme was closed.

The estimated live viewers for the event were 235.



IADVL SIG Pigmentary Disorders
in collaboration with IADVL Andra Pradesh under the aegis of IADVL Academy
presents

“The Pigmentary Disorders CME”
4th July 2021 (Sunday)
4 pm – 8 pm

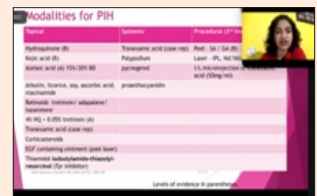
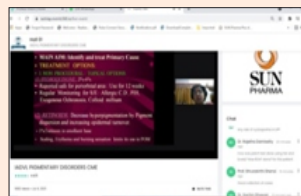
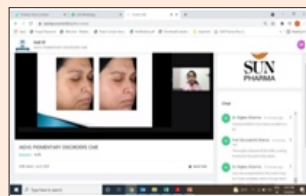
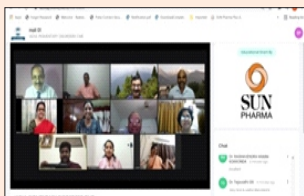
Scientific Programme Report

Dr A Prasad Chowdary, President, IADVL Andhra Pradesh opened the session and gave the welcome address. Dr M Sendhil Kumaran, Coordinator, IADVL SIG Pigmentary disorders gave the welcome remarks. Dr Kavya Chennamsetty, the CME Co-ordinator, was the master of ceremony. The lectures ensued followed by a panel discussion.

Dr Vijay Zawar, member SIG, spoke on What is new in systemic therapy of Melasma. Dr Rashmi Sriram, member of SIG, gave a lecture on Macular amyloidosis-where are we?. Dr Kavya Chennamsetty gave a talk on Facial acanthosis nigricans Vs maturational hyperpigmentation – marker for metabolic syndrome. SIG member, Dr Surabhi Sinha gave insights on Approach to lichen planus pigmentosus and post inflammatory hyperpigmentation. This was followed by another talk by Dr Vinutha R, member of SIG on Acquired hypermelanosis- case scenarios. Dr Surabhi Dayal, another member of SIG, delivered a talk on Periorbital melanosis and PDL-causes and management pearls. Dr Chethana S G, Convener of SIG, gave a lecture on Lasers for pigmented lesions which was followed by audience questions.

The panel discussion was on “Addressing the conundrums of pigmentation from the experts” which was moderated by Dr Sanjay Rathi, member of SIG, who welcomed the other panelists from the state branch and SIG – Dr Vijay Zawar, Dr M Sendhil Kumaran, Dr I Chandrashekar Reddy, Dr Deeksha Meher and Dr Ramatulasi. The discussion was purely case based, practical, followed with tips from all panelists. The vote of thanks was delivered by Dr Chethana SG, Convener SIG and the programme was closed.

SIG pigmentary disorders CME has been accredited with 2 credit points by Andhra Pradesh Medical Council
A total of 542 attended the CME with 1566 views



IADVL SIG Pigmentary Disorders in collaboration with IADVL Telangana under the aegis of IADVL Academy presents.

“IADVL Pigmentary Disorder CME” 18th September 2021 (Saturday) 5 pm – 8:15 pm.

Scientific Programme Report

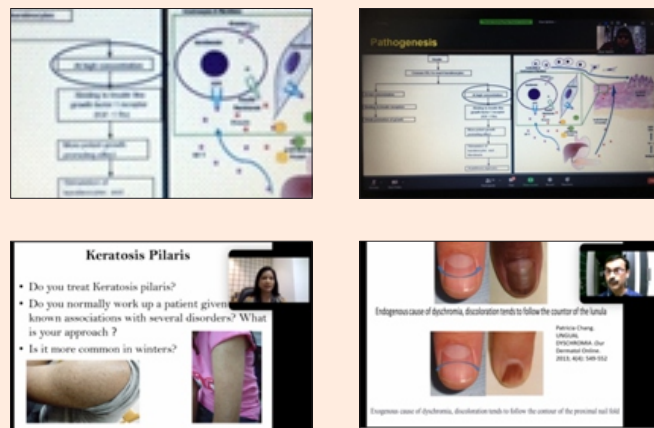
Dr D.B.N. Murthy, President, IADVL Telangana opened the session and gave the welcome address. Dr M Sendhil Kumaran, Coordinator, IADVL SIG Pigmentary disorders gave the welcome remarks. Dr Bhumesh Kumar Katakam, the Hon. Secretary, IADVL Telangana gave the programme introductory talk, followed by the lectures and panel discussion.

Dr Rajetha Damisetty, spoke on How I manage difficult to treat Melasma. Dr V K Somani, gave a lecture on How I manage Lichen planus pigmentation and post inflammatory hyperpigmentation. This was followed by a talk on How I manage periorbital melanosis by Dr Surabhi Dayal, member of SIG. Dr Vijay Zawar gave insights on How I manage – Exogenous ochronosis

The panel discussion was on “Pigmentary Dermatoses- Management challenges in children and adults- case based” which was moderated by Dr Sanjay Rathi, member of SIG, who welcomed the other panelists from the state branch and SIG – Dr Vishal Gupta, Dr P L Chandravathi, Dr D Sudha Vani, Dr Padmavathi Supaneni and Dr S B Kavitha. The discussion was purely case based, practical, followed with tips from all panelists.

This was followed by another talk by Dr Atiya Yaseen, member of SIG on How I manage – childhood acanthosis nigricans. Dr Chethana S G, Convener SIG, delivered a talk on How I manage – difficult to treat

IADVL SIG pigmentary, Disorders
in collaboration with IADVL Telangana Under the aegis of IADVL Academy “presents”



“The Pigmentary Disorders CME”
18th Sept 2021 (Saturday)
5 pm – 8:15 pm

Dr D B N Murthy, President, IADVL Telangana gave the Presidential address and **Dr Sendhil Kumaran**, Co-ordinator, SIG Pigmentary disorders opened the session and welcomed everyone. **Dr Bhumesh Kumar Katakam**, Hon. Secretary IADVL Telangana discussed the theme and the flow of the programme. The lectures ensued followed by a panel discussion.

The esteemed chairpersons for the lectures were **Dr G Narasimha Rao Netha** and **Dr R V Sathyanath**, introduced the speakers and their topics. **Dr Rajetha Damishetty**, spoke on the How I manage difficult to treat Melasma. **Dr V K Somani** spoke on How I manage Lichen Planus Pigmentosus and post inflammatory hyperpigmentation. SIG member **Dr Surabhi Dayal** gave insights on How I manage Periorbital melanosis. SIG member **Dr Vijay Zawar** spoke on How I manage Exogenous Ochronosis

The panel discussion was on “Pigmentary Dermatoses-Management challenges in children and adults (Case based)” which was chaired by **Dr P Vidyasagar** and **Dr N Sudeer**. The session was moderated by **Dr Sanjay Rathi**, member of SIG Pigmentary disorders who welcomed the other panelists from the state branch and SIG members— **Dr Vishal Gupta**, **Dr PL Chandravathi**, **Dr D Sudha Vani**, **Dr Padmavathi Supaneni** and **Dr S B Kavitha**. The discussion was purely case based and practical, replete with tips from all panelists.

The next session lectures were chaired by Dr D B N Murthy and Dr B Janardhan. **Dr Atiya Yaseen** spoke on the How I manage childhood acanthosis nigricans. **Dr Chethana S G** gave a lecture on how I manage difficult to treat areas in vitiligo. **Dr Vinutha Rangappa** spoke on How I manage Macular Amyloidosis. **Dr Sanjeev Auranbadkar** gave the last talk on How I manage Pigmentary lesions with Lasers. Vote of Thanks was given by **Dr Chethana S G** Convener SIG Pigmentary disorders

IADVL SIG Pigmentary Disorders
in collaboration with IADVL Karnataka under the aegis of IADVL Academy
presents

“The Pigmentary Disorders CME”
20th Nov 2021 (Saturday)
5 pm – 7 pm

Dr Shashikumar Kumar B N, President, IADVL Karnataka gave the welcome note. **Dr Sendhil Kumaran**, Co ordinator, IADVL SIG Pigmentary disorders discussed the theme and the flow of the programme along with the Introductory remarks. **Dr Chethana S G** was the master of ceremony. The lectures ensued followed by a panel discussion.

The esteemed chairpersons for the lectures were **Dr Sudhir Nayak U K** and **Dr Sudipta Roy**, introduced the speakers and their topics. **Dr Vinma Shetty**, spoke on Management of Melasma. **Dr Atiya Yaseen** spoke on Exogenous Ochronosis- An update. **Dr Shagufta Rather** gave an interesting talk on Pigmented Contact Dermatitis- Whats new? SIG member **Dr Vishal Gupta** spoke on Quality of life in Lichen Planus Pigmentosus

The panel discussion was on “An approach to the differential diagnosis of facial pigmentation and management- A case based “which was moderated by **Dr Sudipta Roy**, who welcomed the other panelists from the state branch and SIG members– **Dr Vishal Gupta, Dr Vinma Shetty, Dr Atiya Yaseen, Dr Shagufta Rather and Dr Sendhil Kumaran**. The discussion was purely case based and practical, replete with tips from all panelists. The session was closed by the vote of thanks given by **Dr Chethana S G**, Convener SIG Pigmentary disorders.

IADVL SIG Pigmentary Disorders
in collaboration with IADVL Uttar Pradesh and Uttarakhand under the aegis of IADVL Academy
presents

“The Pigmentary Disorders CME”
5th Dec 2021 (Sunday)
5 pm – 7:15 pm

Dr Sumit Gupta, President, IADVL Uttar Pradesh and Uttarakhand gave the welcome note. **Dr Deepika Pandhi**, Chairperson, IADVL Academy gave the Introductory remarks. **Dr Chethana S G** was the master of ceremony. The lectures ensued followed by a panel discussion.

The esteemed chairpersons for the lectures were **Dr R P Sharma** and **Dr Vibhor Kaushal**, introduced the speakers and their topics. **Dr Sendhil Kumaran**, Co ordinator of SIG Pigmentary disorders spoke on ADMH- Whats in a name. **Dr Vijay Zavar** spoke on Exogenous Ochronosis: Pearls from clinical practice. SIG member **Dr Rashmi Sriram** gave insights on macular amyloidosis recent treatment modalities. **Dr Vinutha Rangappa** spoke on Dermatoscopy in periorbital melanosis and the last talk was on Pigmentary Demarcation lines- newer insights by **Dr Chethana S G**.

The panel discussion was moderated by **Dr Sanjay Rathi**, member of SIG Pigmentary disorders who welcomed the other panelists from the state branch and SIG members– **Dr Amith M madan, Dr Neeraj Pandey and all the speakers**. The discussion was purely case based and practical, replete with tips from all panelists.

Finally the vote of Thanks with delivered by **Dr Dipankar De**, Convener of IADVL Academy.

MEDICAL MANAGEMENT OF VITILIGO: WHAT IS NEW?

“The only way you improve is to try new things”

..... *Charles Koch.*

Dr. Atiya Yaseen
Sub District Hospital Pampore

Although fairly widespread, much is still unknown about vitiligo including its causes and treatment. There is no consistent, durable therapy for all vitiligo patients, highlighting the unmet need for new safe and effective therapies to control this disease. Introduction of some new drugs for this pigmentary disorder, over the past couple of years, has made significant contribution to its existing treatment armamentarium. Among these topical and oral JAK inhibitors have gained popularity.

SUPEROXIDE DISMUTASE:

Fontas E et al. Oral gliadin-protected superoxide dismutase in addition to photo therapy for treating non segmental vitiligo: A 24-week prospective randomized placebo-controlled study. J Eur Acad Dermatol Venereol. 2021. Apr 30.

A 24-week monocentric interventional prospective randomized placebo-controlled trial in the tertiary center for vitiligo care in France was conducted. Subjects with nonsegmental vitiligo affecting more than 5% of the total body surface were included. The subjects received gliadin-protected SOD (GP-SOD; 1 g/day for 12 weeks followed by 0.5 g/day for 12 weeks) or placebo in combination with twice-weekly sessions of NB-UVB. The primary endpoint was the total repigmentation rate at 24 weeks. A total of 50 patients were included. After 24 weeks, a greater improvement in VES was observed in the GP-SOD group (19.85%; SE 4.63, P < 0.0001) compared with the placebo group (8.83%; SE 4.72, P = 0.0676). It was found that use of GP-SOD appears to be a valuable add-on to phototherapy in the treatment of vitiligo patients.

IMMUNOSUPPRESSANTS:

Abdelmaksoud A et al. Topical methotrexate 1% gel for treatment of vitiligo: A case report and review of the literature. Dermatol Ther. 2019;32(5):e13013.

This was a preliminary observation on the use of topical methotrexate in one patient with stable vitiligo. The patient applied topical methotrexate 1% gel twice daily for 12 weeks. Significant improvement of the lesion with no local or systemic side effects were noted during the course of therapy. It was proposed that this well-tolerated drug could be used for vitiligo therapy.

Bishnoi A et al. Oral mycophenolate mofetil as a stabilizing treatment for progressive non-segmental vitiligo: results from a prospective, randomized, investigator-blinded pilot study. Arch Dermatol Res. 2021;313:357-365.

In this prospective, randomized, investigator-blinded study, 50 patients of active vitiligo [baseline vitiligo disease activity (VIDA) score 4] were randomized into two groups in 1:1 ratio. Group A received oral dexamethasone (2.5 mg on two successive days a week) and group B received mycophenolate mofetil (up to 2 g) for 180 days with a treatment-free follow-up period of 90 days. It was concluded that both OMP and mycophenolate mofetil halt actively spreading vitiligo, and have diverse adverse effect profiles. These should be offered in progressive vitiligo, especially in circumstances that do not permit the use of phototherapy. Relapse occurred significantly earlier with mycophenolate and relapse rate was higher (though nonsignificant) than dexamethasone OMP. The repigmentation potential is minimal for both therapies.

ANTIOXIDANTS:

Sun Y et al. Randomized clinical trial of combined therapy with oral α -lipoic acid and NB-UVB for nonsegmental stable vitiligo. Dermatol Ther. 2021;34:e14610.

The prospective, multi-center, parallel controlled, double-blind randomized clinical trial was conducted in seven comprehensive tertiary hospitals in China. The patients were randomized into oral ALA group or placebo group at a dose of 300 mg daily for 6 months. All of them received NB-UVB phototherapy three times weekly. The repigmentation rate was evaluated by 4-point grading scale of improvement: >98%, 50-98%, 10-49%, <10%. A total of 133 patients were enrolled in the study, including 72 cases in treatment group and 61 cases in control group. ALA did not show additional benefit to NB-UVB therapy in the treatment of nonsegmental

stable vitiligo. More studies should be done to identify other protocols of ALA or other types of antioxidants for stable vitiligo.

APREMILAST:

Majid et al. Apremilast is effective in controlling the progression of adult vitiligo: A case series. *Dermatol Ther* 2019;32(4):e12923

Successful use of oral apremilast therapy in controlling the progression of adult onset vitiligo in 13 patients was reported. The patients had not responded to other systemic treatments earlier. In addition to the control of progression, eight patients (61.5%) showed some evidence of repigmentation after apremilast therapy. Gastrointestinal adverse effects and headache were the commonest adverse effects reported that led to cessation of treatment in two cases.

JANUS KINASE INHIBITORS:

Mobasher P et al. Open-label pilot study of tofacitinib 2% for the treatment of refractory vitiligo. *Br J Dermatol*.2020;182:1047–1049.

This was an open-label study with tofacitinib 2% cream twice daily in 16 patients with vitiligo. Notably, patients were allowed concomitant use of TCS, TCI, supplements, or phototherapy during the study. Repigmentation was observed in 81.2% of patients. In addition, >90% repigmentation was observed in four patients, 25-75% repigmentation in five patients, 5-15% repigmentation in four patients, no change in two patients, and slow progression in one patient, with more improvement in facial lesions compared with other sites

Phan K et al. Repigmentation in vitiligo using janus kinase (JAK) inhibitors with phototherapy: systematic review and Meta-analysis. *J Dermatolog Treat*. 2020; 2:1-5.

The study was conducted to determine the expected response of vitiligo to JAK inhibitor therapy and factors which influence response rates. From the 9 eligible studies, individual patient data from 45 cases were pooled. Good response was achieved in 57.8%, partial response in 22.2%, and none or minimal response in 20% of cases. Concurrent phototherapy was significantly associated with higher rates of good overall response ($p < .001$) and good facial response ($p < .001$). There is promising low-quality evidence regarding the effectiveness of JAK inhibitors in vitiligo. Concurrent UVB phototherapy appears to improve efficacy of JAK inhibitors for vitiligo.

Rosmarin D et al: Ruxolitinib cream for treatment of vitiligo: A randomised, controlled, phase 2 trial. *Lancet*.2020;396:110–120

.This phase 2 study evaluated the efficacy and safety of ruxolitinib cream at three different concentrations (0.15, 0.5 and 1.5%) compared with placebo, for up to 52 weeks. Patients were classified into four different groups of ruxolitinib: 1.5% twice daily, 1.5% once daily, 0.5% once daily and 0.15% once daily. Efficacy was evaluated using the percentage of patients achieving $\geq 50\%$ improvement in the baseline facial VASI (F-VASI50). The ruxolitinib 1.5% once and twice daily groups achieved a F-VASI50 in 50 and 45% of patients, respectively, at 24 weeks compared with 3% in the placebo group

Komnitski M et al. Partial repigmentation of vitiligo with tofacitinib, without exposure to ultraviolet radiation. *An Bras Dermatol*. 2020;95:473–476.

This case detailed a patient with rheumatoid arthritis associated with vitiligo in treatment for two years, whose condition partially improved initially after eight months of oral tofacitinib at a dose of 5 mg twice a day, without exposure to ultraviolet radiation and with continuous improvement during these two years of treatment.

STATINS:

Yazdani Ashtiani S et al. Preparation and Safety Evaluation of Topical Simvastatin Loaded NLCs for Vitiligo. *Adv Pharm Bull*. 2021 Jan;11(1):104-110.

The recent observation of Simvastatin induced repigmentation in mouse models of vitiligo spurred the development of Nanostructured Lipid Carriers (NLC) for drug delivery. It was formulated with the aid of Dynamic light scattering, transmission electron microscopy and differential scanning calorimetry with entrapment efficiency of 99.27% and drug-loading capacity of 3.9% Human safety studies did not reveal any alteration in the skin biophysical parameters upon addition of simvastatin to these particles. The preparation

method of simNLC developed in this study is a suitable method, and the nanoparticles fabricated were safe with acceptable long-term stability and drug entrapment.

EPIGALLOCATECHIN-3-GALLATE

Hu W et al. Topical epigallocatechin-3- gallate in the treatment of vitiligo. Australas J Dermatol. 2021 May 28. doi: 10.1111/ajd.13612

Patients were randomly given topical application of EGCG on the assigned lesions, with pimecrolimus being used as the control for twice a day over a 6-month treatment period. Though both drugs were found to be effective, there was no statistically significant difference between them. The VASI had diminished from 1.19 ± 0.42 to 0.63 ± 0.38 , in the EGCG-treated lesions, while from 1.18 ± 0.43 to 0.61 ± 0.36 in the pimecrolimus-treated lesions ($P = 0.755$). Similarly, the mean PGA score on the EGCG applied side was 4.39 ± 2.23 , while that was 4.43 ± 2.02 on the pimecrolimus applied side ($P = 0.886$). The difference in the improvement degree between pimecrolimus side and EGCG side was not statistically significant ($P = 0.845$). The study concluded that topical EGCG can be effective on treating vitiligo.

PROSTAGLANDIN F2 ALPHA ANALOGS:

Kanokrungeesee S et al. Clinical outcomes of topical bimatoprost for nonsegmental facial vitiligo: A preliminary study. J Cosmet Dermatol. 2021 Mar;20(3):812-818.

In a randomised controlled trial, vitiliginous patches of ten patients were randomized to receive either topical 0.1% tacrolimus ointment or 0.01% bimatoprost ophthalmic solution, applied twice daily for 12 weeks. By week 12, there was a statistically significant decrease in VSA in both groups ($P < .05$), but there was no intergroup variation. At week 12, 20% of the patients in the bimatoprost group and 10% in the tacrolimus group achieved >50% repigmentation; the difference in the overall grading score between two groups were not statistically significant. Even though patients on bimatoprost reported as itching and burning, they did not have any change in intraocular pressure. Topical bimatoprost solutions were safe and effective for the treatment of nonsegmental facial vitiligo with comparable results to tacrolimus ointment. It can be considered as an alternative treatment for facial vitiligo.

Nowroozpoor Dailami K et al: Efficacy of topical latanoprost in the treatment of eyelid vitiligo: A randomized, double-blind clinical trial study. Dermatol Ther. 2020;33(1):e13175.

This was a double-blind clinical control trial. Patients enrolled had generalized or focal vitiligo involving the eyelids. Latanoprost 0.005% gel was applied twice daily for 12 weeks and was compared with placebo. To evaluate severity of the disease the VIDA rating system was used. Serial photos of the patches were taken to compare and evaluate the repigmentation percentage of the patches. The patients in both groups had almost similar VIDA score ($p > .05$). First group showed improved pigmentation, whereas participants in the second group did not show any improvement in the pigmentation. The group treated with latanoprost showed significant reduction in the symptoms of the disease, whereas those treated with placebo did not show any alteration ($p > .05$). No significant complications were observed in either groups. Latanoprost proved effective in treating vitiligo disease involving eyelids.

ATMOSPHERIC PLASMA ACTIVATED HYDROGEL:

Zhai S, et al. Successful treatment of vitiligo with cold atmospheric plasma-activated hydrogel. J Invest Dermatol. 2021:S0022-202X(21)01237-9.

The authors assessed the antioxidant and anti-inflammatory properties of Cold atmospheric plasma (CAP) in both mouse model and in patients with active focal vitiligo in a randomised controlled trial. CAP had restored melanocyte distribution and reduced infiltration of chemokines such as chemokine (C-X-C motif) ligand 10 and cytokine interferon- γ and reduced infiltration of CD11c⁺ dendritic cells, CD3⁺ T cells, and CD8⁺ T cells and enhanced the expression of transcription factor Nrf2. It had achieved partial and complete repigmentation in 80% and 20% of vitiligo lesions, respectively without significant adverse effects. CAP was concluded to offer a promising option for the management of vitiligo.

THE PSYCHOSOCIAL IMPACT OF VITILIGO

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Vitiligo can have a profound negative impact on the patients and on their families. It can lead to embarrassment, a sense of humiliation, loss of self-esteem, negative effect on sexual relationships and job discrimination leading to impairment in quality of life. Further, the long duration, unpredictable course, variable response to treatment and the need for prolonged therapy add to the burden of disease. Vitiligo impacts the psyche of patients with all skin types, though the effect may be much more in patients with darker skin colour. This may possibly be due to the increased visibility of the white patches contrasting with brown skin, leading to greater cosmetic disfigurement.

In India, vitiligo is not just a disease with unsightly white patches, but is a social disease as well. Considerable social stigma is attached to vitiligo which stems from the several myths and misconceptions about the disease. Vitiligo (*Shweta kushtha*) still gets confused with leprosy (*kushtha rog*) in many parts of India, leading to social isolation and ostracism. Vitiligo is considered to be a punishment of past sins according to superstitious beliefs.

About 40-50% patients with vitiligo visiting our hospital have a large effect on their lives. Studies from other parts of India and around the world also suggest a significant impairment in the quality of life of the patients. Apart from a reduction in the quality of life, patients with vitiligo are also more likely to suffer from anxiety and depression. Studies estimate that anxiety may be present in about a third of patients with vitiligo, while one-third to one-fourth of patients with vitiligo may be depressed. Patients with vitiligo are at a 5-times higher risk of depression than those without vitiligo. An Indian study reported suicidal ideation in 28% (high risk 7.5%) of vitiligo patients.

The psychosocial impact of vitiligo is now being increasingly recognized. It does not always correlate with the extent of depigmentation or how visible the lesions are. Furthermore, patient satisfaction after treatment may not correlate with clinical improvement. Clearly, this aspect of vitiligo needs to be evaluated separately from the extent of depigmentation. Questionnaires such as Vitiligo Impact Scale (VIS)-22, VitiQoL or Vitiligo Life Quality Index can be used to assess the effect of vitiligo on the patients' quality of life, while Family VIS-22 can be used for their family members. Targeted interventions to improve the patients' quality of life should be offered to patients with high disease burden, in addition to the standard repigmenting therapies. Cosmetic camouflage is a useful, though underutilized, adjunct. Psychoeducation and counselling can improve the patients' understanding of the disease. Patient support groups can help the patients adjust to their disease and cope better. Clinicians should be sensitive to the psychosocial impact of vitiligo; addressing it can make a difference to the lives of patients.

A RARE CASE SCENARIO

Dr. Vinutha Rangappa
JSS Medical College

11-month-old female baby, born out of consanguineous marriage, was brought with complaints of convulsions during which there was up rolling of eyes and froth from the mouth single episode three days ago. A similar episode occurred at 4 months of age.

Antenatal period was uneventful. The baby was delivered at term via LSCS and postnatal period was normal.

Child appears to be developmentally normal for age and has been immunised as per the recommended immunization schedule.

Nutritional status is average with weight falling between the 50th and 75th centile and height at 50th centile. Cutaneous examination revealed streak and whorled pattern of hypopigmentation over the right side of the trunk and right upper and lower limb.

Cardiovascular, respiratory and abdominal system examination revealed no abnormalities. Central nervous system examination revealed hypotonia of both upper and lower limbs along with attenuation of the grade of deep tendon reflexes of both upper and lower limbs (2/5).

Blood investigations revealed microcytic hypochromic anaemia with thrombocytosis. MRI brain revealed enlarged left cerebral hemisphere and cerebellum relative to the contralateral side along with mildly dilated left lateral ventricle.

Ophthalmologic examination revealed no retinal pathology. On the basis of this finding's child was diagnosed as Hypomelanosis of ito(HI) with systemic involvement.

Child had no further episodes of convulsions and was discharged with oral anticonvulsants (Sodium valproate at the dose of 15mg/kg)



Hypomelanosis of Ito was originally described as purely cutaneous disease, but subsequent studies reported 33-94% extracutaneous manifestations. It is now considered as a rare neuroectodermal disorder. It manifests as hypopigmented bizarre macules with distinct patterns of skin involvement. The lesions follow lines of Blaschko. It can be present at birth or develop later in life. Contrary to Incontinentia Pigmenti these skin lesions are not preceded by inflammatory or degenerative changes. Other manifestations include alopecia and dental abnormalities.

Extracutaneous involvement in HI is seen in about 75% of affected children. Central nervous system being the most common to be involved followed by ocular and musculoskeletal system. CNS manifestations include seizures, mental retardation and developmental delay. A study on 34 children with HI showed 94% extracutaneous manifestation. Among them mental retardation and seizures were the commonest.¹ Few other case reports also show central nervous system involvement in HI.^{2,3} More complex the pattern of pigmentation and also type of pigmentation greater will be the number of other system involvement.

Hence it is important to screen all patients with HI for other systemic involvement specifically Central nervous system.

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QUIZ

Dr. Vinutha Rangappa

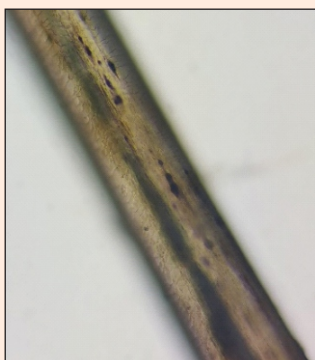
Dr. Sowmya Mathew

JSS Medical College.

1. Which of the following is false regarding the diagnostic criteria proposed by Coupe in 1976 for naevus depigmentosus?
 - a) Presence of leukoderma at birth or early onset in life
 - b) No alteration in texture or sensation in the affected area
 - c) No alteration in its distribution throughout life
 - d) Presence of hyperpigmented border around the achromic area
2. Which of the following types of Waardenburg syndrome is associated with Hirschsprung disease?
 - a) Waardenburg- Shah syndrome
 - b) Waardenburg syndrome type 1
 - c) Waardenburg syndrome type 2
 - d) Waardenburg- Klein syndrome
3. Identify the disease
This child presented with skin changes without any systemic involvement.



Microscopic examination of hair is shown below.



- a) Chediak Higashi syndrome
- b) Griscelli syndrome type 3
- c) Griscelli syndrome type 2
- d) Griscelli syndrome type 1

1. Identify the chemical responsible for causing leukoderma in the below picture.



- a) Monobenzyl ether of Hydroquinone
b) Paratertiary butylphenol
c) Monomethyl ether of Hydroquinone
d) Azelaic acid
1. Allestrandini syndrome is associated with all of the following except?
a) Reduced visual acuity
b) Atrophic iris
c) Uveitis
d) Degenerative retinitis
2. Tigroid appearance” of retina is seen in
a) Ichthyosis vulgaris
b) Scleroderma
c) Halo nevus
d) Vitiligo vulgaris
3. Gene defect in Chediak Higashi syndrome responsible for immunosuppression is?
a) LYST gene
b) PAR 2
c) ABCA12
d) PAX 3
4. Phylloid hypomelanosis is associated with trisomy (or tetrasomy) of which chromosome?
a) Chromosome 17
b) Chromosome 21
c) Chromosome 5
d) Chromosome 13
5. Nitisinone is FDA approved for which of the following condition ?
a) Erythropoetic porphyria
b) Hereditary tyrosinemia
c) Oculocutaneous albinism
d) Vitiligo vulgaris

6. Melanocytes are situated in all , except?
- a) Leptomeninges
 - b) Uveal tract of eye
 - c) Cochlea of inner ear
 - d) Nail bed

ANSWERS

1. d
There should be absence of hyperpigmented border around the achromic area.
2. a
Waardenburg – Shah syndrome or type 4 is associated with Hirschsprung disease.
3. b
Both Griscelli and Chediak Higashi syndrome are associated with silvery grey hair but irregular clumping of melanocytes in the hair shaft is seen in Griscelli and type 3 has only cutaneous features without systemic involvement.
4. b
The lady in the picture is having leukoderma due to para tertiary butyl phenol present in the adhesive material of bhindi.
5. c
Alezzandrini is characterized by unilateral facial vitiligo, degenerative retinitis, atrophic iris and sensorineural deafness.
6. d
Ocular abnormalities affecting the retinal pigment layers have been demonstrated among many vitiligo patients. Destruction of pigment cells in the retinal pigment epithelium and outer choroids gives “Tigroid appearance” to the retina.
7. a
LYST gene is a lysosomal trafficking regulator, defect in this results in immunosuppression presenting with recurrent pyogenic infections in Chediak Higashi syndrome.
8. d
Phylloid hypomelanosis along the lines of Blaschko has been found to be predominantly associated with abnormalities in chromosome 13q
9. b
Nitisinone is a competitive inhibitor of 4-hydroxyphenyl-pyruvate dioxygenase, an enzyme involved in tyrosine catabolic pathway. It is FDA approved for Hereditary tyrosinemia type 1
10. d
Melanocytes are dendritic cells which imparts colour to the structures, they are present in skin, nail matrix, hair bulb, Uveal tract of the eye (Choroid, ciliary body and iris), leptomeninges and inner ear.

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