IADVL

IADVL SIG FEMALE GENITAL DERMATOSES (IADVL ACADEMY) – NEWSLETTER

VULVAR AESTHETICS –FOCUSING UPON THE OBSCURE

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FOREWORD

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Vulvar dermatology is a neglected field of interest, and vulvar diseases are often shunted amongst venereologists, dermatologists and gynaecologists. Often women tend to live with genital itch or pain, than seek treatment. Vulvar aesthetics is a still more obscure area of human aesthetics in total, and is gaining a foothold in aesthetic procedures only in recent years. Incidence of female genital cosmetic surgery is slowly rising in many countries. Along with the advent of vulvar aesthetics, deliberations upon its significance and status arises in patriarchal societies.

Is vulvar pigmentation to be ruthlessly treated? Are vulvar tightening and hymenoplasty procedures beneficial to the mental and physical health of the woman, or is she undergoing it only to please her partner? Is there any scientific basis for vulvovaginal laser rejuvenation including vaginal tightening and vulvar lightening? Where do we stand legally in dealing with cosmetic procedures in the vulvovaginal area including vulvar lightening and liposuction? What are the loopholes of hymenoplasty and vaginal tightening? often, Such questions have no clear answers.

Vulvovaginal dermatology is gradually expanding to encompass vulvar aesthetics and rejuvenation, in addition to addressing the classical vulvovaginal dermatoses. The aesthetic industry has evolved exponentially and is showing huge financial returns with increasing number of care providers as well as patients/clients venturing into it. It is imperative that women undergoing these procedures should be evaluated by experts in vulvo-vaginal diseases. In the last 2 decades, there is an increase in demand for these procedures in India. Female genital cosmetic surgeries are commonly performed by plastic surgeons and gynaecologists though rejuvenation procedures like lasers, platelet rich plasma therapy, fillers and other non-surgical procedures are usually performed by dermatologists. These rejuvenation procedures correct the imperfections and alleviate the psychosexual burden faced by women in their daily life. Various energy-based devices and fillers are exclusively marketed for vulvovaginal use. It is important to understand that the US Food and Drug Association (US-FDA) has approved the energy-based devices only for the treatment of premalignant vulvar and vaginal malignancies and genital warts. Till 2018, FDA has not approved any energy-based medical device for vaginal rejuvenation, cosmetic

procedures, or for the treatment of vaginal symptoms related to menopause, urinary incontinence, or sexual function. They even issued warning that these devices may cause serious adverse effects. This stand has not changed even after 3 years of adding scientific data on the use of these devices. We have added the article on vulvovaginal rejuvenation, not to encourage dermatologists to do those, but to educate regarding various off-label uses. We do not condone the safety or efficacy of these devices.

Surgical procedures, especially hymenoplasty and vulvar recontouring are on increased demand which have been addressed in this newsletter. We have also included an article on the ethical issues underlying female genital aesthetics and procedures thereof.

On the other side, female genital mutilation often remains untouched which is prevalent in African countries and Middle East, and rarely encountered in India, though small pockets exist. It has been dealt with to create awareness among dermatologists.

Witnessing the great interest in pigmentary vulvar disorders whether they are physiological or pathological, they need to be examined carefully and diagnosed at their earliest to give proper treatment.

We also have a case report to pique your senses. Crossword is the real brain teaser, do try to solve it.

To summarize, this newsletter aims at throwing light on a few aspects of vulvar aesthetics hoping to enlighten the readers upon this obscure topic. We fervently hope that we restrain from muddying further the murky waters of vulvar cosmetology and aesthetics.

" Happy reading from the SIG Female Genital Dermatoses, 2021-22."

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VULVAR PIGMENTATION AND ITS MANAGEMENT

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Female genitalia has the highest density of melanocytes (1500 melanocytes/square cm) lesions of the vulva are present in 12–19% of the women. It is estimated that 1 in 10 woman have a life time probability of pigmented vulvar lesion (melanocytic or non-melanocytic). Vulvar pigmentation can be classified into benign and malignant for prognostic implications. (Table 1)

Individual vulvar pigmentary conditions:

Physiologic hyperpigmentation - It occurs due to hormonal changes and appears as asymptomatic, symmetric, smooth, brown or black patches or macules with no scales or change in texture of skin, commonly involving posterior introitus, edges of labia minora, perianal skin, labia majora, proximal and medial thighs.

Melanocytic nevi (nevocellular nevi) - About 23% of pigmented vulvar lesions in reproductive age women are melanocytic nevi, which are either congenital or acquired. It presents as asymptomatic, symmetric, well-demarcated, tan or brown macules (junctional nevi) or soft papules (compound or intradermal nevi) on the labia majora, labia minora, and clitoral hood. Lesions can be blue due to dermal pigment. Color is homogenous and does not change in appearance over time. Nevi in premenopausal women, with enlarged junctional melanocytic nests are variable in size, shape and position. Presence of dysplastic nevi and large congenital nevi increases the risk of cutaneous melanoma.

Pigmented seborrheic keratosis - It presents as flat-topped, hyperpigmented, keratotic papules with follicular plugings and stuck-on appearance. Moisture, heat and friction over vulva make the lesions less verrucous.

Post inflammatory hyperpigmentation - Inflammatory conditions of vulva like lichen planus (LP), lichen sclerosus (LS), fixed drug eruption, erythema multiforme, contact dermatitis and trauma due to scratch or burns can lead to pigmentation. LS and LP have reticulated pigment macules along the peripheral edges of the vestibule or perineum.

Vulvar intraepithelial neoplasia (VIN) - Multifocal Human Papilloma Virus (HPV) related disease (Bowenoid papulosis) or squamous cell carcinoma in situ occurs in younger women linked to HPV type 16, 18, and 31. Risk factors include smoking, multiple sexual partners, and immunosuppression. Lesions are usually asymptomatic, hyperpigmented, flat-topped papules or plaques with distinct margins. Unifocal HPV-unrelated disease mostly occurs in older women with LS or LP on the vestibule and lateral labia minora. VIN must be managed early because of the risk of progression to invasive vulvar

carcinoma. Treated with podophyllin may be misinterpreted histologically as VIN.

Atypical melanocytic nevus - It represents 10% of all pigmented lesions and 5% of melanocytic nevi over labia minora or majora in adolescent and young women. Pigmented macules are smooth surfaced with one or more atypical features like asymmetry, irregular border, larger size, and variable pigmentation. Intradermal nevi are usually skin colored or lightly pigmented. Nevi can occur within the lesions of LS.

Lichen planus - Among patients of LP, 20% have genital lesions. Classical hypertrophic and erosive forms are seen on perineum and perianal area.

Genital melanosis/Lentiginosis - It affects about 68% of women in their 5th decade, with unknown etiology. Lentigines are asymmetric macules with irregular borders. Color variation is seen over labia minora, vulvar trigone, vestibule, medial labia majora, introitus and perineum. Association with LS increases the risk of melanoma. Lentigo can be sporadic or a component of few syndromes such as Bannayan-Riley-Ruvalcaba, LAMB (lentigines, atrial myxomas, and blue nevi), Laugier-Hunziker, Dowling-Degos disease, LEOPARD (lentigines, electrocardiographic abnormalities, ocular hypertelorism, pulmonary stenosis, abnormal genitalia, retarded growth, deafness), NAME (nevi, atrial myxoma, myxoid neurofibromas, and ephelides) and Peutz-Jeghers syndrome.

Melanomas - Vulvar melanoma represents 10% of all vulvar neoplasms and is 2nd common cancer of the vulva, after squamous cell carcinoma. Amelanotic melanoma accounts for 25% of all vulvar melanoma of which 10% arise in pre-existing vulvar nevi. They are asymptomatic or pruritic in early course and may have bleeding, ulceration, pain, and tenderness in late course. Patients with lighter skin types, family history of melanoma or inherited dysplastic nevus syndrome are often at higher risk. It presents as large, irregularly pigmented brown macules or papules on clitoral area, labia majora, labia minora and periurethral area in women over 50 years. Of note, ABCDE (asymmetry, border, color, diameter and elevation) rule can't be applied on mucosa.

The etiology is complex and multifactorial. KIT is the most commonly mutated gene found with sequence variants detected in up to 35% of vulvar melanomas. It has high levels of chromosomal instability, and can also occur within the lesions of LS. They are often diagnosed late and carry poor prognosis. Breslow thickness, ulceration, and lymph node involvement are important prognostic indicators.

Pigmented BCC - is a low-grade neoplasm constitutes 5% of primary vulvar cancers. It presents as solitary, skin-colored to pink, tan-to-brown and black papules, plaques, nodules, polyps, ulcers, hyperpigmented or hypopigmented macules on the labia majora in older women. Although metastasis is not a concern, up to 10% recurs but are never fatal.

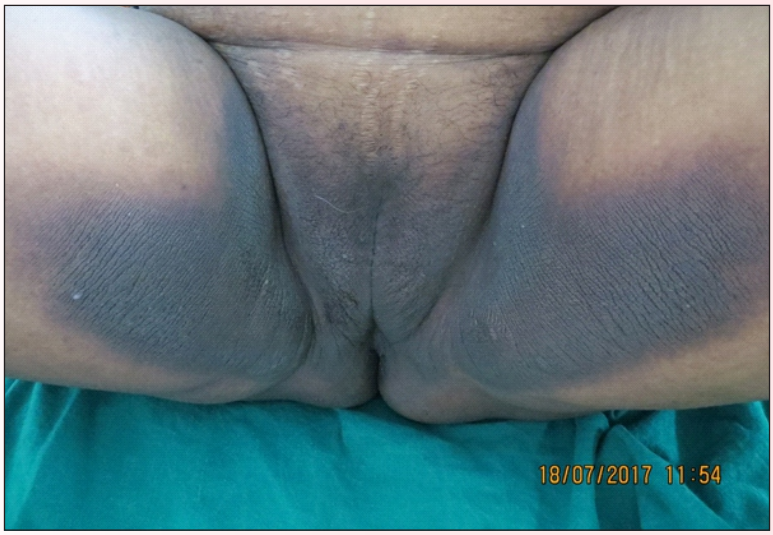

Fig.1: Acanthosis nigricans

Table 1: Common pigmented conditions of the vulva

Benign pigmented lesions	**Malignant pigmented lesions**
Postinflammatory hyperpigmentation(PIH)	Vulvar intraepithelial neoplasia(VIN)
Acanthosis nigricans	Melanoma
Seborrheic keratoses	Pigmented Basal cell carcinoma (BCC)
Pigmented condylomata acuminata (anogenital warts)	
Melanotic macules (lentiginosis, melanosis),	
Melanocytic Nevi (MN)	
Angiokeratomas	
Physiological pigmentation	
Skin tags (a crochordons)	
Atypical melanocytic nevus	
Varicosity	
Papillary hidradenomas	

Dermoscopic and histopathologic findings in individual conditions are given below in Table 2. Diagnostic differences among vulvar nevi, atypical genital melanocytic nevus and melanoma have been summarized in table 3.

Table 2: Dermoscopy & Histopathologic features of various pigmentary disorders of vulva

Conditions with vulvar pigmentation	Dermoscopy	Histopathology
Genital melanosis	Uniform brown color, ring-like, homogeneous, globular, parallel, cobblestone, and reticular patterns	Increase melanin in basal layer, discrete melanocytic hyperplasia without nest formation, epithelial hyperplasia and melanophages in the dermis
Pigmented Anogenital warts	Exophytic-papillary structures with variation in pigment [jet-black(hemorrhage), red dots, whitish-halo (keratinization)]	Hyperkeratosis, parakeratosis, acanthosis, papillomatosis, koilocyte s and pigmented melanocytes with prominent melanin granules
Pigmented Seborrhiec keratosis	Milia-like cysts, a "pseudo-network" of numerous gland openings, absence of pigment network, globules, streaks and cerebriform pattern Comedone-like openings are not seen in the vulva possibly due to friction.	Acanthosis, hyperkeratosis, broad columns of highly pigmented basaloid cells intermingled with horn cysts. Mitotic figures remain confined to the basal layers, and atypical mitoses are absent.
Post-inflammatory hyperpigmentation	-	Melanin in the dermis, extracellularly or inside melanophages known as pig mentary incontinence.
Acanthosis nigricans	Linear crista cutis and sulcus cutis with scattered black or dark brown dots and globules.	Acanthosis, hyperkeratosis, papillomatosis without increased melanin or melanocytes
Physiological pigmentation	-	Increase in melanin content and number of melanosomes of melanocytes and keratinocytes of the basal layer
Pigmented BCC	Blue-grey ovoid nests and arborizing vessels	Nests of proliferating basaloid cells with peripheral palisading. Pigment within tumor nests as well as pigmentary incontinence

Table 3: Dermoscopic & histopathological differences among vulvar nevi, atypical genital melanocytic nevus and melanoma

Conditions	Dermoscopy	Histopathology						
		Lentiginous growth	Pagetoid growth	Ulceration	Dermal atypia	Dermal mitosis	Dermal maturation	Necrosis
Nevus	Homogeneous, globular and cobblestone pattern	_	_	_	_	_	+	_
Atypical genital melanocytic nevus	Mixed pattern, parallel lines with homogeneous pigmentation, globules and globular pattern	Minor	+/- focal and central	_	Superficial, confluent	Rare, superficial	preserved	_
Melanoma	Multicomponent patterns comprised of blue-white veil, irregular streaks, dots and atypical network and vessels	+	++	++	Deep	Abundant, deep	_	prominent

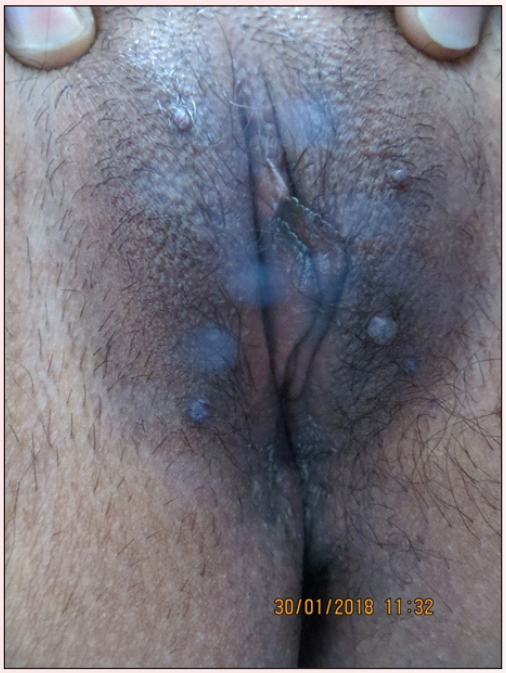

Fig.2: Genital lichen planus

Approach to a patient with vulvar pigmentation:

- **History:** Women rarely examine the vulva, so history is often not very revealing.
- **Clinical examination:** Vulva, introitus, fornices, perineum, perianal region, vagina and cervix should be carefully inspected followed by palpation and scopy, whenever necessary. Regional lymph nodes should always be palpated.
- **Dermoscopy** is a helpful tool for clues to diagnosis, as well as for selection of the best site to perform biopsy.
- **Biopsy:** If a vulvar lesion is atypical, elevated having history of bleeding and not responding to treatment, biopsy is warranted to exclude malignancy. Punch or excisional biopsy should be performed. Serial biopsies may be needed with high index of suspicion.
- Clinical photography and photodermoscopy, after patient's signed informed consent, should be done at initial visit and at every follow up.
- Non-invasive investigations such as reflectance confocal microscopy, pump probe microscopy, pelvic MRI and PET scan are required in vulvar melanoma, though may be available only in specialized centres.

Management: It needs to be individualized based on the etiology of pigmentation and can range from innocuous moisturization and depigmentation to more aggressive measures as in melanoma and other malignant and premalignant conditions. The treatment options for various pigmentary conditions are enlisted in Table 4.

Table 4: Treatment approach for vulvar pigmentation

Observation and Reassurance	Medical Management	Destructive therapy	Surgery
• Physiological pigmentation • Genital melanosis • Melanocytic nevi • varicosity	• Lichen planus - Topical potent steroids, retinoids, calcineurin inhibitors • Postinflammatory hyperpigmentation - Topicals – hydroquinone, 5-fluorouracil and 5-aminolevulinic acid based photodynamic therapy • Acanthosis nigricans - Topicals – keratolytics (ammonium lactate 12%, salicylic acid), calcipotriol, hydroquinone 4%, fluocinolone acetonide 0.01%	• Seborrheic keratosis - • Angiokeratoma - electrocautery • VIN - cryotherapy • Skin tags - Electrocautery, cryotherapy • Papillary hidradenoma - electrocautery • Pigmented condyloma acuminate - Cryotherapy, electrocautery	• Melanocytic nevI - Excision as mimic melanoma on histopathology • Melanoma/Squamous cell carcinoma/ pigmented BCC - Local excision with 1-2 cm margins - Radical vulvectomy - Groin dissection or sentinel lymph node biopsy for tumors thicker than 1 mm - Radical lymph node dissection - Dacarbazine chemotherapy and interferon as an adjuvant therapy - Radiation and chemotherapy - Gene based molecular therapy - immunotherapy • VIN - CO2 laser

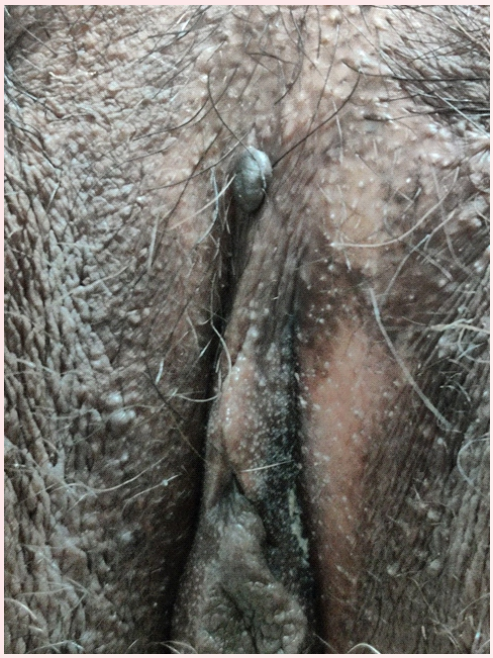

Fig.3: Melanocytic nevus

Conclusion

Any lesion over vulva leads to curiosity of being malignant causing social, mental and psychological disharmony. Women often suffer in silence due to sensitive area and do not seek medical care. Dermatologist should be aware of the variegated clinical presentations and correlate pathologically if needed, to better manage the case reducing the psychological sequelae. A combined approach of gynecologist, dermatologist, primary care physician, or health care providers specialize in vulvar skin disorders is much recommended.

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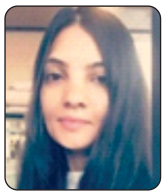
HYMENOPLASTY AND ITS RAMIFICATIONS



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Hymenoplasty refers to surgical restoration of hymen. It is also known as hymenorrhaphy or re-virginization.

Hymen is a ring-shaped elastic membrane which can be thin and flexible or thick and rigid, covered with mucosal epithelium separating vestibule from vagina. It is often round, oval or annular but can also be cribriform, imperforate or septate (figure 5).

There are many circulated myths about hymen, the most common one being, intact hymen is a sign of virginity. In reality, normal activities like bicycle or horseback riding, athletics, gynecological examination, masturbation and inserting tampon can cause hymen to rupture or tear. In fact, 1 in 1000 women are born without one. Another myth is that women must experience small amount of bleeding and pain from the hymenal tear at her first intercourse. Even to this day and age, in many cultures this is considered as a sign of virginity. A very small percentage of women may experience this. Of note, in many women, first rupture of hymen, regardless of the method doesn't cause any bleeding or pain.

In recent years, hymenoplasty has gained popularity worldwide due to the cultural importance attached to hymenal rupture after nuptials. Surgeons across the globe, including United States, Europe, the Middle East and Asia have reported an increased number of hymenoplasty procedures. Women requesting this procedure are from all religions and communities. India, too, has witnessed rise in this procedure by 20 – 30 percent in past few years.

What are the indications for Hymenoplasty?

Hymenoplasty is done for women who may wish to repair or reconstruct their hymen. There are many psychological and physical reasons for women seeking this procedure.

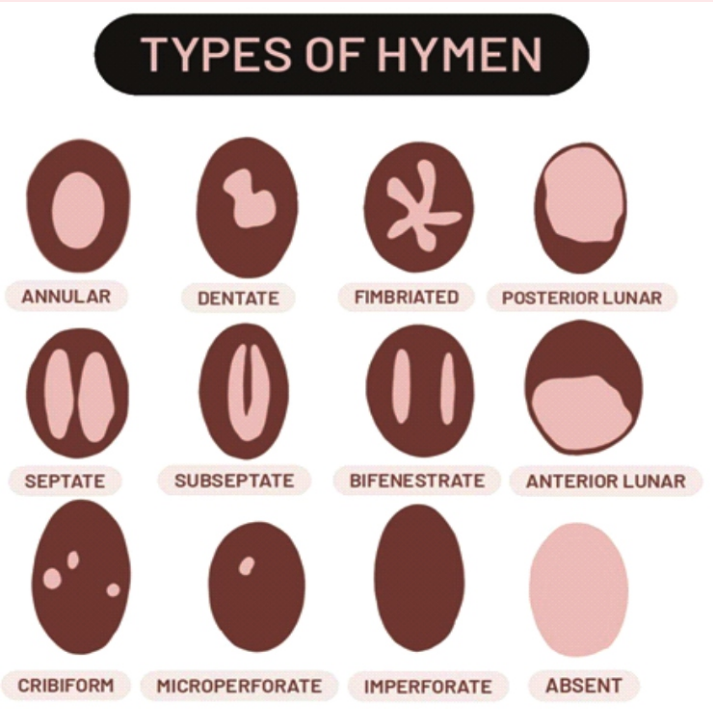
- Intact hymen is important in many cultures; hence many women undergo this procedure as an indication of purity for the upcoming nuptials.
- Many women, who are sexually active undergo this procedure to give their partner a virginal experience, as a gift for special occasion.
- In case of sexual assault, hymenoplasty, not only helps in physical restoration of hymen but also helps in giving psychological comfort to the women.
- Many women opt for this procedure when there has been accidental rupture of hymen.

- Hymenoplasty is sometimes combined with vaginoplasty in women who have weak vaginal muscles after childbirth.
- In case of imperforate, septate or microperforate hymen, hynemoplastic procedure called hymenotomy is performed.

Hymenoplasty: Varieties of surgery and complications

Hymenoplasty is classified under procedures known as female genital plastic and/or cosmetic surgery. It is a simple day care procedure, usually done under local anesthesia. This procedure takes 1-2 hours. There are several techniques. One method is which restore the hymen suturing the hymenal remnants. If there is insufficient membrane to restore or if it is absent, then the surgeon may use another technique where hymen is reconstructed using the vaginal mucosa or a synthetic tissue. A small blood supply is usually added to the newly created hymen (figure 6). Post-procedure care includes abstinence from sexual intercourse for 4-6 weeks, avoid using tampons or any exercise that causes increase in pressure in vaginal region for a week.

The procedure is relatively safe, and patients can return to their normal activity in 24 to 48 hours. The complications are rare, and include pain, discomfort, bleeding and risk of infection. Rarely, overcorrection can cause dyspareunia during the first intercourse after surgery.



← **Figure 4: Types of Hymen**

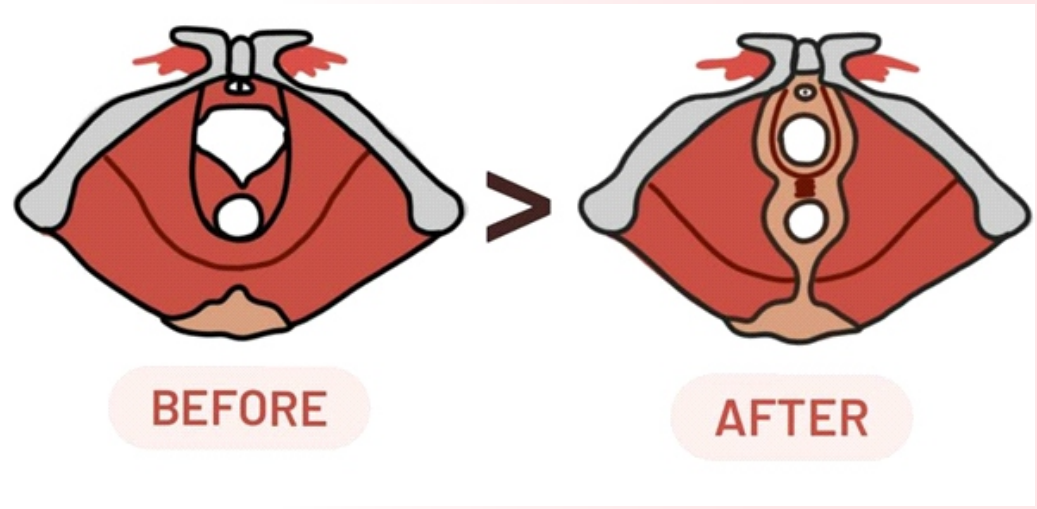


Figure 5: Hymenoplasty

Acknowledgement – Figure artwork by Miss Aashka Mehta

Ethical perspectives on hymenoplasty:

Although in India and many western countries worldwide, hymenoplasty is legal, its need and role are debatable. There are ethical and scientific controversies to perform this procedure. Hymenoplasty at one end protects women from the violence and stigma associated with losing their virginity before marriage and at the other end it contributes and propagates the cultural norms that promote sexual inequality. Community and public must be educated regarding lack of evidence between virginity and hymenal rupture.

The state and international bodies should also create awareness about anatomy and physiology of hymen and take responsibility to break cultural barriers.

Conclusion

In conclusion, hymenoplasty is a simple procedure with increasing demand all over the world even though it creates a lot of ethical, social and religious controversies. American Congress of Obstetricians and Gynaecologists stress the importance of using the “interpretive model” of medical counselling which emphasizes on alliance, communication and clinical empathy with the patient.

Further Reading

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CROSSWORD QUIZ

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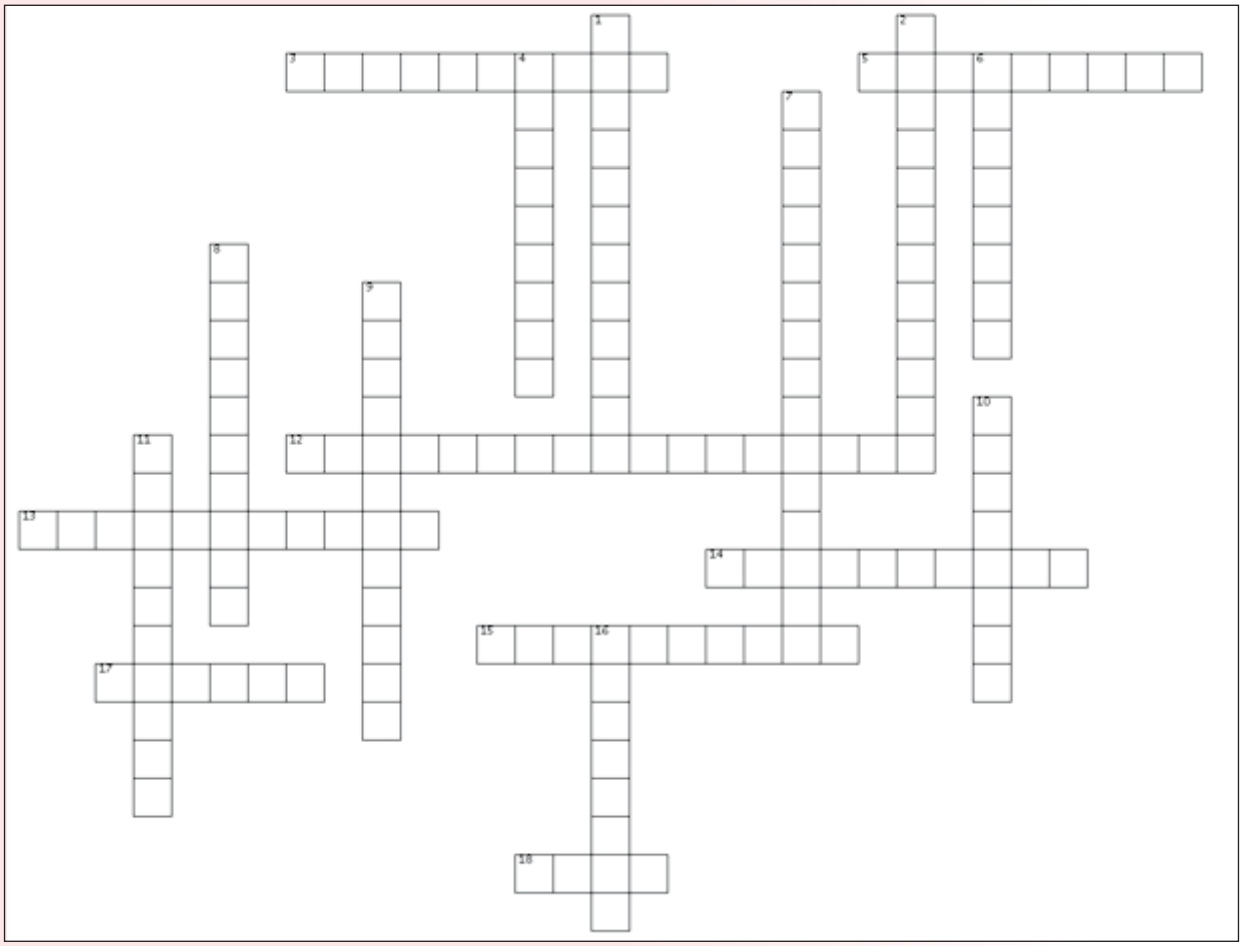

ACROSS

3. Selective Estrogen Receptor Modulator
5. Reactive non-sexually related acute genital ulceration
12. Inclusion bodies in keratinocyte
13. Gonococcal infection of perineum
14. Bed-side test for visualisation of wart
15. Sign for the diagnosis of scabies
17. Survey conducted to study impact of Vulvovaginal atrophy
18. Catheter for treatment of Bartholin cyst

DOWN

1. Removal of external female genitalia
2. Topical derived from green tea for warts
4. Criteria for vestibulodynia
6. Adjuvant recombinant VZV vaccine
7. Blue gray macules with pubic pruritus
8. Practice of sticking crystals on genital area
9. Test for menses elasticity
10. Mass spectrometry analysis of pathogens
11. Sign due to Poupart's ligament
16. Clinical scoring system for Vulvar Lichen Sclerosus

❖ **Use the clues to fill in the words above.**

- ✓ Words can go across or down.
- ✓ Letters are shared when the words intersect.

FEMALE GENITAL MUTILATION

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Female genital mutilation (FGM) is the intentional mutilation of the female external genitalia by self, or by others due to various reasons. FGM is carried out as a part of cultural practice in certain African and Middle East countries, or induced as a cry for help by psychologically abnormal females.

As a part of cultural practice:

It is practiced in many countries like Africa, Indonesia, Malasiya, Persian Gulf and in ethnic minorities in Yemen, Oman, Kurdistan Iran, Iraq, Central and South America. In India, it is seen in minor pockets in Kerala and Gujarat.

Most often than not, it is performed as a part of an essential ethnic and cultural obligation in early childhood, not later than 15 years of age. It is only rarely that the women mutilate themselves or voluntarily allow others to mutilate them. There is a belief that these practices heal and strengthen religious faith or achieve social amity. A woman with intact clitoris is supposed to be unclean, sexually unfaithful to the partner, and is even suspected to cause death of husband or child, who come in contact with the unclean parts.

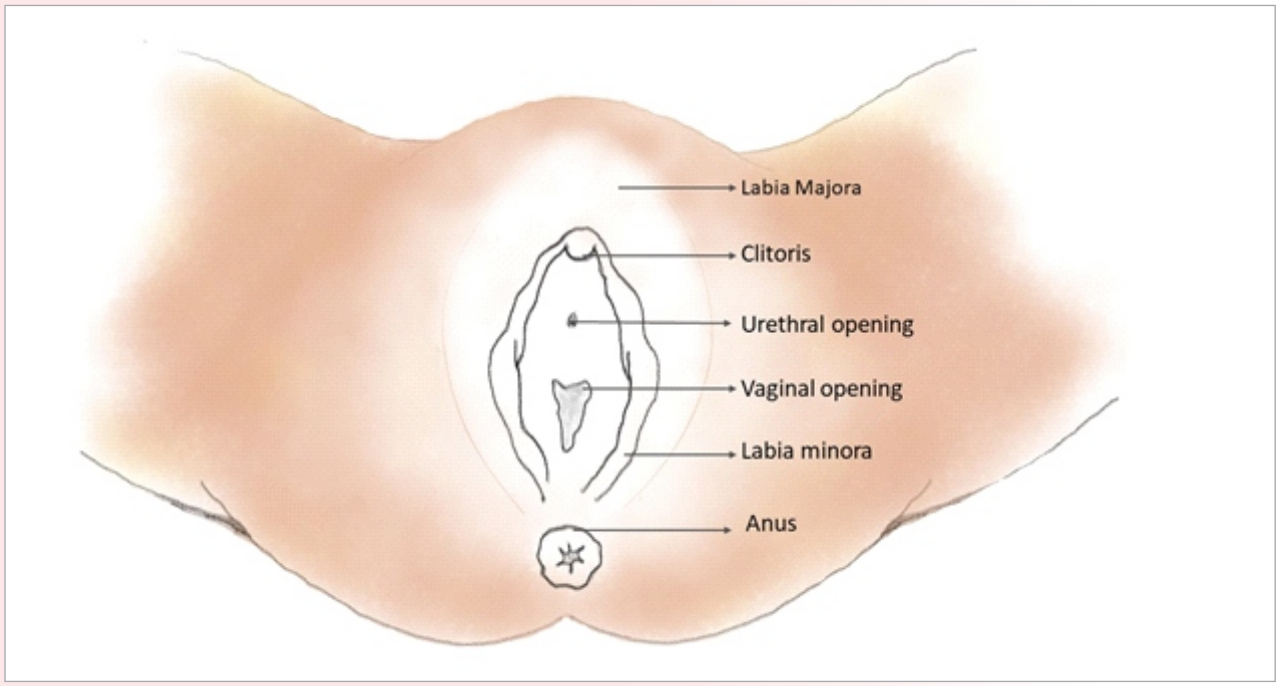
It is globally considered as violation of human rights of girls and women. It reflects deep rooted inequality between genders and constitutes extreme form of discrimination against women. World health organization (WHO) is actively campaigning and liaising to curb this practice.

WHO Classification of FGM: It has been classified into various common subtypes based upon the part mutilated. (Table 5)

Table 5: Types of FGM

Type 1	Type 2	Type 3	Type 4
Partial or total removal of the clitoris (***clitoridectomy***) or clitoral hood.	Partial or total removal of the clitoris and labia minora, with or without excision of the labia majora (***excision***)	Narrowing of the vaginal orifice with the creation of a covering seal by cutting and appositioning the labia minora or labia majora, with or without excision of the clitoris (***infibulation***)	All other harmful procedures done to the female genitalia for non-medical purposes (for example pricking, pulling, piercing, incising, scraping, and cauterization)

Figure 6 Normal external genital anatomy



Figures 7-9 Different types of FGM.

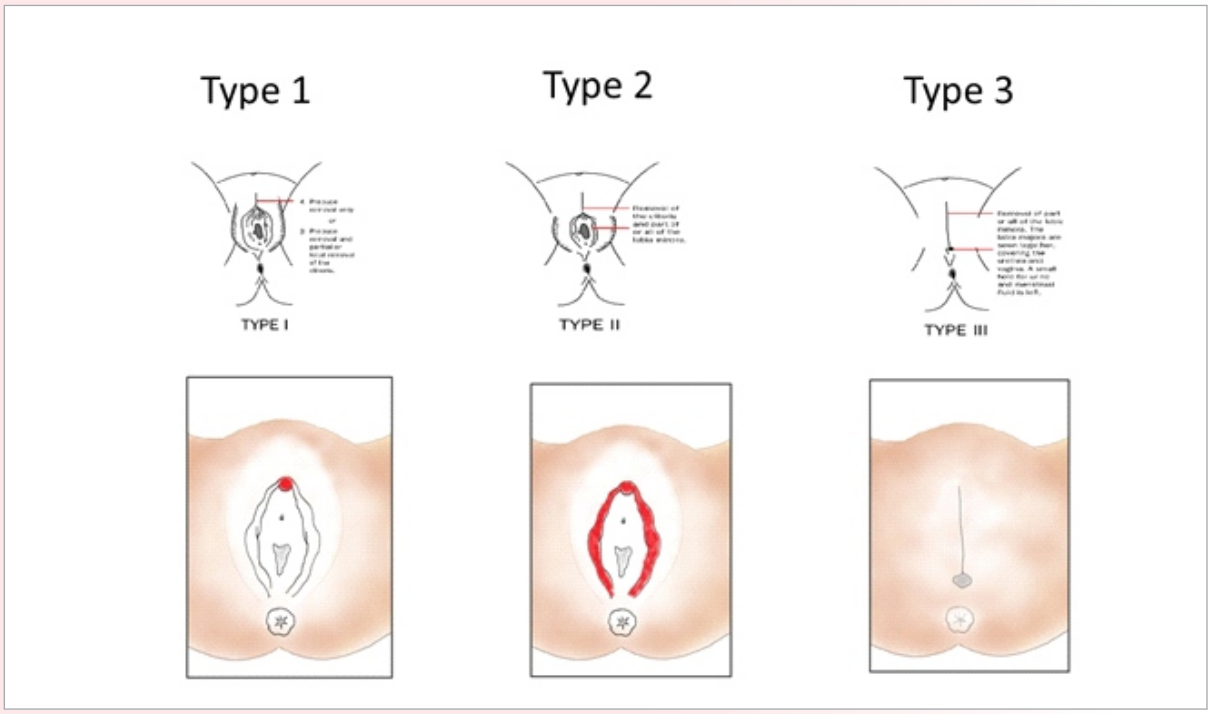


Fig 7 **Fig 8** **Fig 9**

Acknowledgement : Figure art -Dr Sujitha Sanam Reddy

Complications

The complications are both physical and psychological. Some are seen immediately while some are delayed especially the psychological complications.

Immediate complications: It includes pain, haemorrhage, oedema, fever, bacterial or candidial infection. In few patients, septicemia may occur causing shock and even death.

Delayed complications: Post-traumatic stress disorder (PTSD), anxiety, depression, neuroses, and psychoses are common delayed complications that are associated with FGM. Hypertrophic and keloidal scars, development of neuromas with severe pain, hematocolpos, cyst formation, difficult labour, dyspareunia, recurrent urinary tract infections and infertility are some of the other late complications.

Infections such as human immunodeficiency virus (HIV), Chlamydia trachomatis, Clostridium tetani, herpes simplex virus (HSV)-2 are more common among women who underwent type 3 mutilation compared with other categories.

Need for surgical correction: Re-fibulation surgery is an attempt at partially correcting the stricture caused by infibulation. This usually occurs after marriage when there is difficulty in intercourse or anticipated difficulty in subsequent childbirth.

Organizations and governments are putting huge efforts to eradicate this by taking various measures such as making new laws to protect against the practice and educating the people with the help of social media by conducting open debates.

The efforts to formulate preventive strategies and provide therapies by cultural education and training of medical professionals is necessary, which is unfortunately lacking in many countries.

FGM Prevention act:

Since 1965, 24 of the 29 countries with the highest prevalence of FGM/Cutting (FGM/C) have used a human rights-based approach to their legislation on FGM/C. Penalties can range from 3 months to lifetime imprisonment. Several countries also impose monetary fines. Twelve developed countries with substantial FGM/C-practicing populations have also passed laws criminalizing the practice.

Management: FGM/C can cause a negative perception of genital self-image and negative expectations regarding social acceptance and sexuality. Prevention and good quality care of complications associated with FGM/C requires a multidisciplinary team approach.

Self-harm or self-inflicted injury:

Female genital self-mutilation (FGSM) is a very complex psychological phenomenon with very limited published data.

WHO defines self-harm as an act with non-fatal outcome. The individuals deliberately initiate a non-habitual behaviour which causes self-harm if not interfered by others. There is no suicidal intention. Thus self-injury is commission of deliberate injury to one's body without the help of other person. The injury is severe enough to cause damage or scarring.

Self-harm or mutilation is of 3 types:

1. Major: Localised acts with severe body tissue destruction, mostly observed in psychotic individuals and in intoxicated states. e.g. eye enucleation, genital amputation, male genital mutilation, female genital mutilation.
2. Stereotypic: There are repeated self-mutilating destructive acts seen in mentally subnormal individuals. e.g. repeated head banging.
3. Superficial or moderate: usually seen in personality disorders. e.g. skin cutting, skin carving.

Genital self-mutilation is a very rare entity seen in patients suffering from psychosis. As compared to males, it is less well recognised in females. This could probably be due to under reporting. The presentation in females is usually not life threatening and hiding of chronic injuries is not difficult.

FGSM is divided in 3 groups-

1. Women with personality disorders (borderline type)
2. Self-induced aborters
3. Psychotic patterns

The aetiology is multifactorial and not completely understood.

GSM in psychotics – It is seen as an ultimate response to delusions and or imperative hallucinations. It is usually accompanied by body dysmorphobia or genital coenaesthesia and enotomania. Some women view their genitals as abnormal and try to remove them.

GSM in borderline personality disorder-

They do not have suicidal intention and the self-mutilation gesture is performed to fulfill some other functions listed below:

1. As a distraction mechanism to divert the attention from mental or physical pain
2. To communicate distress
3. To seek help from other specialities e.g to seek surgical help, self-induction of vaginal bleeding
4. To express anger
5. To cope up with dissociative states e.g when patient sees blood after self-inflicted injury they think that they are alive

The patients who indulge in this demonstrate the awareness of the act before, during and after the event.

The predisposing factors may include neglect in childhood and early parental separation, familial pattern, and high level use of mental and general health resources.

In conclusion whether neurotic or psychotic, GSM is a highly complex psychological phenomenon. It is often difficult to draw a definite conclusion about the relationship between GSM and associated psychopathology. In a borderline

personality disorder there may be an intimate connection with a disrupted sexuality.

Management: It is very complex and involves various specialties like dermatology, general or plastic surgery, psychiatry and clinical psychology. The prognosis is not good in most of the cases and these individuals need long term follow up and counseling.

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Acknowledgement : Figure art -Dr Sujitha Sanam Reddy

FOCUS CASE

Pigmented papules in a 62 year old woman: cause for concern?

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A 62-year-old married female presented with mildly itchy pigmented skin lesions over genitalia of 6 months duration, which were gradually increasing in number and size. There was no history suggestive of immunosuppression or long-term drug intake. On examination, multiple, well defined, greyish-black papules of varying size with verrucous to smooth surface were distributed bilaterally over labia majora and vulva (Fig.10) VDRL and HIV screening test were nonreactive. Complete blood count and random blood sugar levels were within normal limits. Dermoscopy was done with Dermlite-IV (non-polarized) which showed scaly surface, brown and grey dots with dotted vessels (Fig. 11).

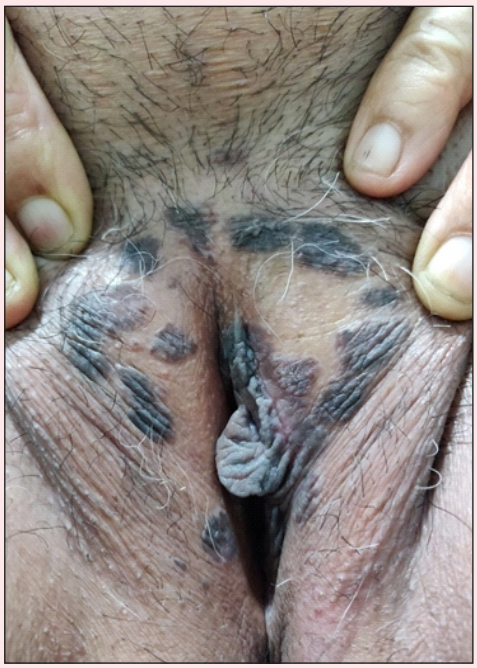

Figure 10: *Well-defined, papules greyish black of varying size with verrucous to smooth surface distributed bilateraly over labia majora and vulva*

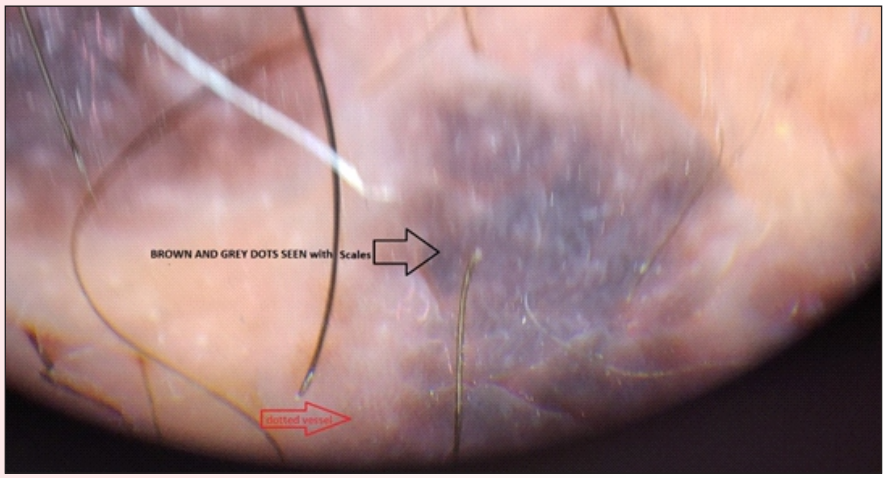

Figure 11: *Scaly surface, brown and grey dots and dotted vessels*

Biopsy shows moderate epidermal hyperplasia with thickening and confluence of rete ridges. The surface of lesion is mamillated. The thickened epidermis shows mild to moderate nuclear pleomorphism. The epidermal keratinocytes show

haphazard arrangement and crowding in foci throughout the epidermal thickness. Scattered mitotic figures (normal and abnormal) are seen above the basal layer. The granular layer and corneal layers are slightly thickened (Fig 12a, 12b).

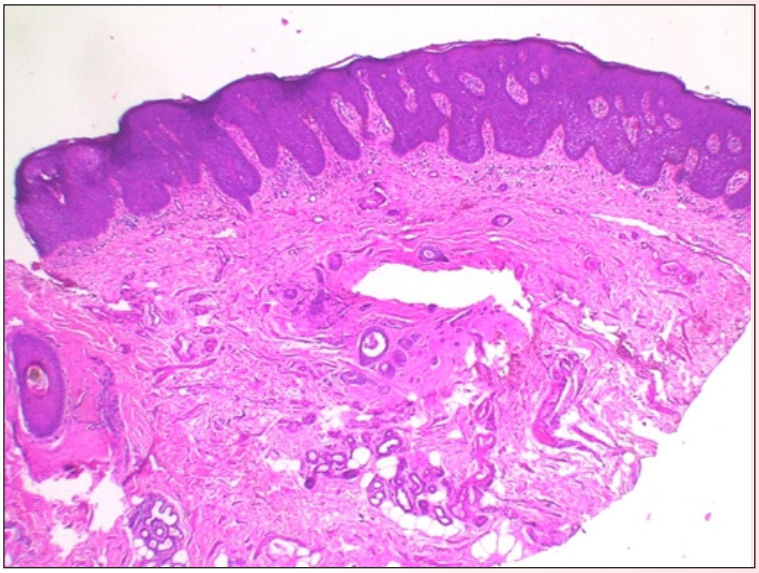

Figure 12a: *Moderate epidermal hyperplasia with thickening and confluence of rete ridges. The surface of lesion is mamillated. (H & E, X 200)*

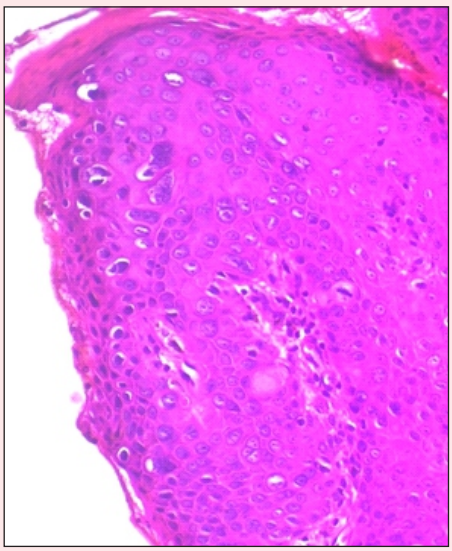

Figure 12b: *The thickened epidermis shows mild to moderate nuclear pleomorphism. Scattered mitotic figures (normal and abnormal) are seen above the basal layer. (H & E, X 400)*

A diagnosis of Bowenoid Papulosis was made, and patient was treated with topical 1% 5 -fluorouracil (5-FU). At 6 weeks follow-up, majority of the lesions healed (Fig.13).

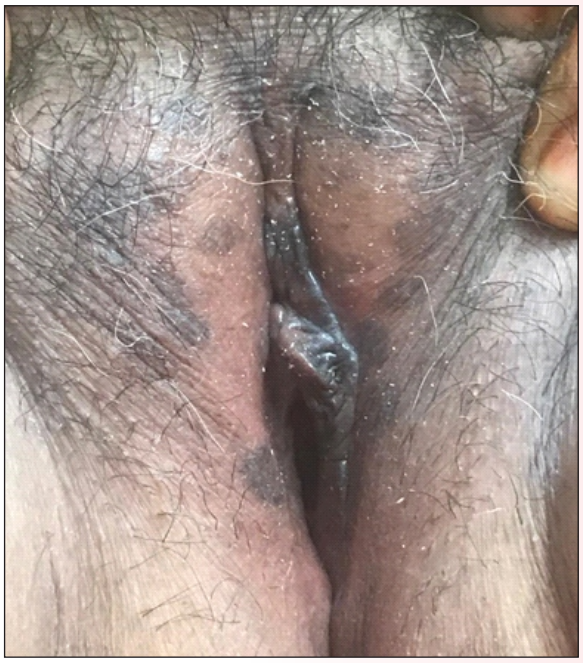

Figure 13: *Resolved lesion showing post inflammatory hyperpigmentation*

Bowenoid papulosis (BP) was first described by Kopf and Bart in 1977, and is mostly a disease of male genitalia.

In women, it presents as multicentric violaceous or erythematous planar papules along the vulva, perineum, or intertriginous skin folds, although solitary lesions have been reported.

It is considered to be a sexually transmitted precancerous skin condition of the genital area due to HPV induced intraepithelial dysplasia (low-grade in situ carcinoma), mainly associated with HPV 16, occasionally with 18 and 33.

Histopathologically, it is characterized by koilocytosis, enlarged polymorphic and hyperchromatic nuclei, and abnormal mitosis and hyper- or parakeratosis with a collection of melanin of variable amount.

Dermoscopic findings of BP reported in previous articles include brown and grey dot structures with linear extension and glomerular and dotted vascular structures.

Being a low-grade in situ carcinoma, the prognosis is good with occasional spontaneous regression. In immunosuppressed patients, it may evolve into invasive squamous cell carcinoma. The differentials to be considered include anogenital warts, seborrheic keratosis, Bowen's disease, pigmented basal cell carcinoma, and dermal melanocytic nevus.

Treatment options include topical agents such as 5-fluorouracil, imiquimod, podophyllin or cidofovir. Surgical modalities are excision, electrocautery, CO2 laser, cryosurgery, and photodynamic therapy. Interferon and topical or systemic retinoids have also been tried.

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VAGINAL REJUVENATION

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Vaginal Rejuvenation refers to procedures that primarily reduce the width of the vagina for reasons of function and wellbeing. In the current era of increased health consciousness and life expectancy, women have also become conscious about their intimate health. It is estimated that more than 20 million women are affected by uterine prolapse, birth injuries, and incontinence. Vaginal delivery, natural aging and atrophy results in conditions such as vaginal relaxation syndrome or vulvovaginal laxity. Furthermore, 40% women have psychological distress from female sexual dysfunction, but only 14% consult a doctor regarding the same. The procedures for vaginal rejuvenation include the following:

- Surgical procedures - vaginal tightening, labia minora plasty, labia majora plasty, clitoral hood reduction, hymen reconstruction and lipofilling.
- Non-surgical procedures - energy-based treatments, PRP and fillers.

The non-surgical and energy-based modalities have tremendous response and patient acceptance and can easily be performed by dermatologists and hence this newsletter focuses more upon it. Indications include patients with mild to moderate stress urinary incontinence (SUI), overactive bladder, vaginal dryness, decreased lubrication, orgasmic dysfunction, grade 1 prolapse and vaginal laxity.

Energy-based devices (EBD) stimulate type 1 collagen production in the extracellular matrix via the stimulation of fibroblasts, which results in the contracture of elastin fibers, neovascularization, and improved vaginal lubrication and increased glycogen content.

EBD for vaginal rejuvenation include radiofrequency (RF) or laser sources, such as carbon dioxide (10,600 nm) and erbium-YAG (2940 nm).

CO2 Laser with continuous mode of 8-10 W with defocus is used till the depth of vaginal rugae vaporization i.e. 2- 5 mm width. Vaporization should stop at the level of endopelvic fascia. It stimulates type 1 collagen in extracellular matrix via the stimulation of fibroblasts. A minimum of 3- 4 sittings at 4-6 weeks interval are required.

Erbium YAG laser has 'SMOOTH' technology, where nonablative thermal effects are used to produce vaginal collagen hyperthermia and remodeling. Vaginal wall mucosa is heated up to 65 degree centigrade and 2 sittings at 4-6 weeks interval are required.

Several RF devices, which emit focused electromagnetic waves, are currently available which help increase in small nerve fiber density in the papillary dermis, neo-collagenesis and neo-elastogenesis in the submucosa. Transurethral monoploar RF (0.2-0.5 mm depth of penetration) is used to treat SUI, wherein 3-4 sittings at monthly interval are required. Nonablative RF is used to achieve tightening of the vaginal canal. Reverse gradient RF energy vary from 75-90 J/m delivered through 2 vaginal mucosa. The treatment session lasts between 15-30 minutes. For bipolar RF, the depth of penetration is 4 mm with sittings ranging from 2-6 at 2-3 weeks interval. Average treatment time is 8-30 minutes.

Other non-invasive procedures for vaginal rejuvenation include injectable volumizers such as Hyaluronic Acid, PRP and Physical devices such as Silicone Threads and Gore-Mycromesh. They act by improving vaginal dryness and laxity and amplify G-spot (Female Sexuality centre).

Advantages of EBD in vaginal rejuvenation have been enlisted in table 6.

Table 6: Advantages of Energy-based Devices used for vaginal rejuvenation

Advantages
1. Non-invasive lunch time procedures
2. Average treatment time is 8-30 minutes
3. Painless or minimal pain
4. No anesthesia required
5. A touch up sitting of repeat session is required after 12-18 months.
6. Well tolerated
7. Daily activities can be resumed immediately after procedure except for sexual activity where abstinence for 3 days is required.
8. No specific safety care is required except for laser protection glasses for eyes .

Limitations

Before performing vaginal rejuvenation for sexual reasons, the precise nature of sexual dysfunctions should be preliminary ruled out and extensively discussed with women to avoid unrealistic expectations, since in many cases, surgery is not appropriate and may not lead to a definitive solution. The patient's notion of vaginal laxity and prerequisite for vaginal rejuvenation is often vague and subjective. Complications like infections, altered sensations, dyspareunia, scarring and adhesions may occur.

Conclusion

Although energy-based devices have shown promising results for the functional & cosmetic issues of women's intimate areas in small studies, the paucity of data on the subject necessitate more definitive large double blind RCTs. Before opting for, it is necessary to take into account other factors like normal anatomic variations, cultural, relational and most importantly psychological; as they are also responsible for a healthy and satisfying sexual life. A multidisciplinary approach involving a psychologist and a sexologist should be considered before performing vaginal rejuvenation as the patient is likely to have an underlying psychological issue.

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VULVAR AESTHETICS AND REJUVENATION – THE RIGHTS AND WRONGS

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What is an aesthetic vulva? Who defines it? Until the advent of the “hairless” vulva, the actual shape of the vulva was obscured and not relevant. There was no right or wrong. Then came the various social media posts, “influencers”, “bloggers”, twitter handles, who laid down their norm of vulvar perfection viz a plump, perfectly - symmetrical, fair, hairless vulva or the “barbie doll” look which all women should ideally vouch for. The vulva needed to be “perfect” for good health and a necessary requirement for a satisfactory sex life. Shuai Qiang et al have even extrapolated the “golden phi ratio” to measure the vulva in order to define an 'aesthetic” vulva. This social media influence has permeated down to teens, who are prompted into comparisons leading to insecurities, diminishing self-worth and low self-esteem. Darker skin types want “fairer” vulvas and want to undergo various procedures like peels, energy-based devices, lasers etc to achieve the same. Especially, peels for the “intimate” areas which claim to be “gentle but effective”, are out in the market. Their claiming results seem to be deceptive to say the least. Medical practitioners promising these dreams should remember that the genital area in the skin type IV to VI is dark by virtue of its location, hormones and the friction of daily activities which causes thickening of the skin, leading to the perception of pigmentation. Peels and lasers could be of very little help, albeit transient. Patients need to be made aware of this reality.

Insecurities, especially in women with body dysmorphobia are further fanned by the world wide web. Very few sites mention the vulvar diversity which actually exists, and is truly “normal”. Kudos to the Great Wall of Vaginas by artist Jamie McCartney for showcasing vulvar diversity.

The word “rejuvenate” means 'to make someone look or feel young and energetic again'. Similar to any other part of the body, with the steady decline of estrogens, the vulva and vagina undergo structural and physiological aging. The labia lose their youthful fullness, the introitus, vaginal canal becomes lax with child-bearing and the mucosal dryness makes sexual intimacy painful or dissatisfying. Urinary incontinence, prolapsed uterus, sexual dysfunction constituting the “*genito-urinary syndrome of menopause*”, severely impair the women's quality of life.

Vulvar genital cosmetic surgery (VGCS) has been growing steadily across the world, and India is not far behind. The procedures include labioplasty, clitoral hood reduction, and hymenoplasty. Labioplasty is about altering the size of the labia minora so they are not visible when the labia majorae come together. It may have adverse outcomes such as asymmetry, irregularity, excessive or inadequate tissue removal and dysesthesias. These are not mentioned on the

surgeon's websites who advertise their successes. In contrast, several websites sell "correction of botched" labioplasties. Hymenoplasties are sought by women who want to portray themselves as virgins in a new relationship. Clitoroplasty for cases of congenital clitoromegaly is justified to necessarily preserve the neurovascular tissue to allow for the normal orgasmic response.

Various "rejuvenating" procedures both surgical and non-surgical are now available of which non-surgical modalities such as lasers, and light systems, PRP and dermal fillers have gained popularity. These have also been used to in the management of medical conditions like lichen sclerosus and to improve the components of the genito-urinary syndrome of menopause. The success rate reported in various publications are promising, but have inadequate case-series to routinely justify their use. Larger case series are required with proper controls.

A 2019 Consensus document by Mario Preti, et al published in the Journal of lower genital disease, recommends sic: "Based on the available scientific evidence, with no supporting long term follow-up data, the use of LASER should, at present, not be recommended for the treatment of vaginal atrophy, vulvodynia or lichen sclerosus. The data for the role of LASER for stress urinary incontinence and vaginal laxity are inadequate to draw any conclusions or safe practice recommendations. Therefore based on the available scientific evidence and on the lack of long term follow-up, the use of LASER should, so far, not be recommended for the treatment of vaginal atrophy, vulvodynia, lichen sclerosus, stress urinary incontinence, vaginal prolapse, or vaginal laxity".

So is vulvar cosmetic surgery justified?

The answer is yes when the normal structure is deformed with disease, growths, malformations, or post-cancer surgery. It is justifiable when the physical structure such as exceptionally large labia minorae interfere with day to day functioning, sports, sitting, walking, or during sexual intimacy. Restoration of size and function of a lax dry vagina is also justified. The health care providers need to be honest about the results promised, counsel on the possible complications, and should perform such procedures only when the patient needs it more than if the patient desires it. Patients must be carefully screened for body dysmorhobia, as is done for any other cosmetic surgery.

Doing any procedure which is irrational and with the thought that someone else will do it if you do not, is completely reproachable.

Women are not meant to become "Barbie dolls" and it is not normal.

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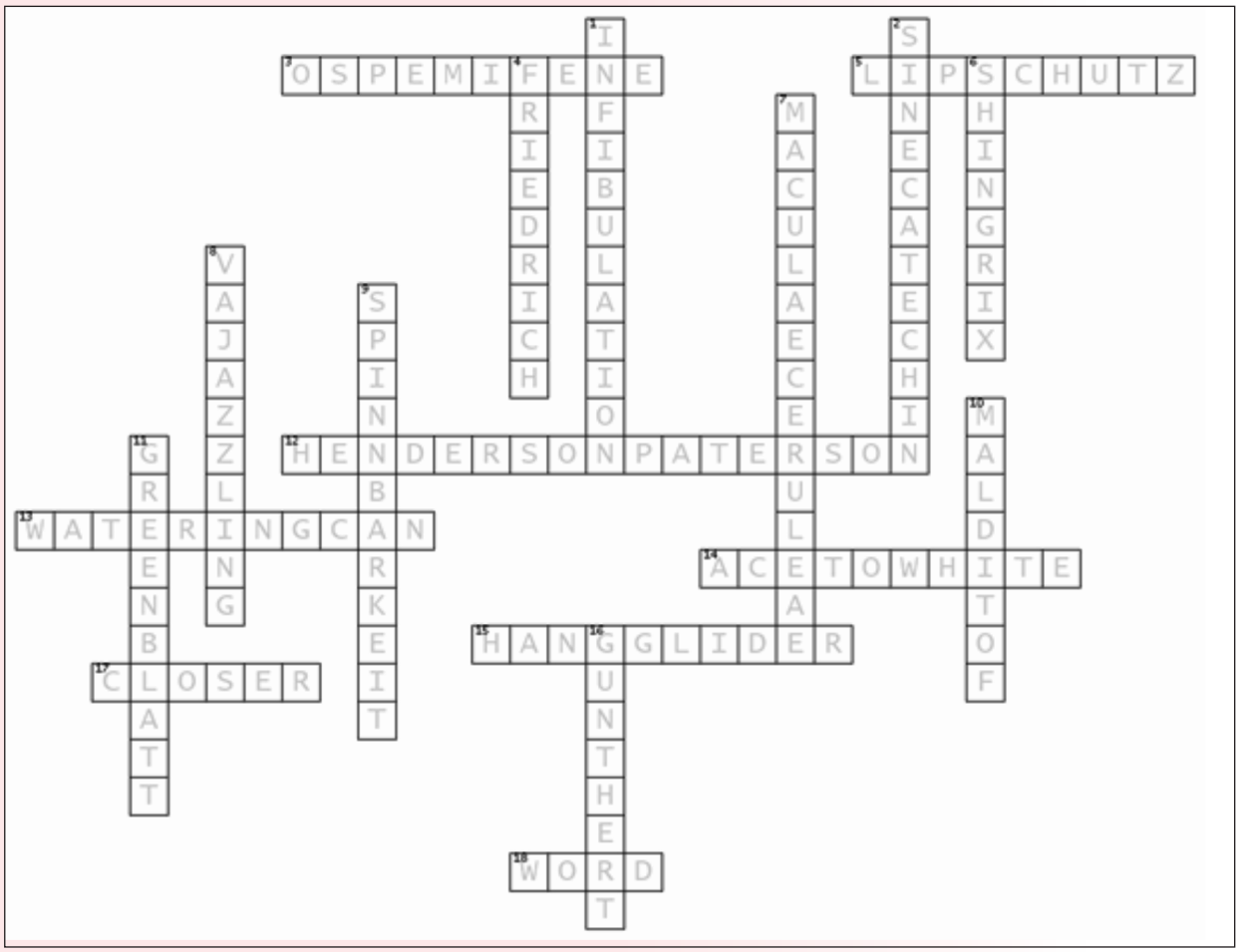
FGD CROSSWORD ANSWERS



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