



YUVA DERMA E-BULLETIN



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EDITOR'S NICHE

“Upgrading your skills is not an option, it’s a necessity !”

The world of dermatology as we know has undergone tremendous changes in the last decade. Not only have we progressed in understanding the diseases better but there’s also been a revolution in the treatment available, especially in the field of aesthetics and procedural dermatology. From a bird’s eye view approach, the focus is slowly shifting towards a holistic approach including lifestyle changes and routine skin care. Keeping this in mind, we bring to you the 16th edition of Yuvaderma e-bulletin with a fresh entree of topics, not just limited to the subject but also related to current practices and trends.

Our first article is all about the enticing journey of Dr CR Srinivas a doyen in the field of innovations and dermatosurgery. Keeping up with the ever-growing field, we have articles highlighting the need for training in procedural dermatology and include novel topics like Microneedling Radiofrequency, energy-based devices in the treatment of keloid, ear lobe repair, and Glutathione in dermatology. A few interesting case studies by residents throw light on some of the uncommon dermatological diseases.

Keeping the non-academic interests alive while pursuing their academic endeavors is essential for a fulfilling life. We at Yuvaderma encourage non-academic articles, poems and art to keep this fire alive in an otherwise mundane life. Our non-

academic section has poems, write-ups along with a few art pieces and photographs.

I would like to thank Dr. Prakash Kololgi and Dr. Shruthi. H. N for giving me this opportunity to head the editorial team that I was an integral part of for the last 5 years. I wholeheartedly thank my team for their efforts in bringing this edition to its conclusion. I thank Dr Sanjay Tejaswi for guiding me through this journey. I also thank all the residents who sent their articles and made this edition a success.

HAPPY READING FOLKS!



Regards,
Dr Priyanka Karagaiah
Editor in chief
Yuvaderma E-Bulletin

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DR. PRAKASH KOLOLGI
PRESIDENT

PRESIDENT'S PREAMBLE

Greetings to all young dynamic dermatologists.

It gives me immense pleasure to write this message.

I have gone through previous bulletins. It's really inspiring and motivating to youngsters and even to me as well. The bulletin contains inspirational discussions of senior dermatologists, various writeup of diseases. Many residents have great talents. This is the right platform for them to grow to higher level.

I am sure this bulletin will be better than the previous one and motivates to bring the next one still better.

I hope more youngsters will contribute more to this bulletin and make it the best.

I, on behalf of IADVL KN sincerely thank Dr Priyanka and her team for bringing out such beautiful bulletin.

Long live IADVL

Wishing you all the very best.

Wishing all the very best

Regards,

Dr. Prakash Kololgi

President, IADVL Karnataka



DR. SHRUTHI H.N.
HON. SECRETARY

FROM THE SECRETARY'S DESK

Hey Yuvas! congratulations on being a part of IADVL KN. We are conducting DERMABASICS - RESIMED, DERMAADVANCE, and now RESICUTICON also added to the kitty, all for the advantage of the residents.

Residents are the future of the fraternity in Dermatology, so hoping that all of you take part actively in the activities of IADVL and enjoy your learning process. Make clinical dermatology as foundation for learning.

I would like to thank Dr Priyanka Karagiah & team for doing a fantastic job for Yuvaderma journal.

Long live IADVL KN!

Long live IADVL!

With regards,

Dr. Shruthi H.N.

Honorary Secretary

IADVL Karnataka



DR. SANJAY THEJASWI R
ADVISOR

ADVISOR SPEAKS

“Learn continually, there’s always one more thing to learn, as said by Steve jobs” We are glad to present you all a novel edition of yuvaderma-2023 with a bunch of learning materials right from basics to the advances.

To highlight a few interesting one’s, Can a skin booster, boost ur confidence? A note on skin boosters, A New wave of mnRF, the Leading edge on nailsurgeries, dig into the book to know more. Debate on Glutathione, the most trending topic in every social media. To understand more on the upcoming treatments in Keloid we have interviews too.

The budding Dermatologists are always enthusiastic in presenting a great amount of content to latest edition with all the academic contents to name a few, Acrodermatitis continua of hallapeu and Generalized lichen nitidus a rare case report. A heartfelt thanks to the editor in chief Dr Priyanka Karagiah, who has put collective efforts to bring out the beautiful content.

I wish to thank our Honourable Dr.Prakash Kololgi, the president for constant support, encouragement. And also I thank Dr. Shruthi H N, Honourable secretary for all the guidance.

A man learn by only 2 things; one is reading and the other is association with smarter people - Will Rogers
Wishing you all a smart learning through yuvaderma-2023 ebulletin.

Dr. Sanjay Thejaswi R

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Decades of Dermatology :
**A Candid
Conversation with
Dr. C.R. Srinivas**

“Go with the Flow”

Dr. Chakravarthi Rangachari Srinivas, a distinguished dermatologist and researcher, is currently the Professor and Head of Dermatology at Kalinga Institute of Medical Sciences in Bhubaneswar. He also holds the title of Adjunct Professor in Dermatology at KMC Manipal. With an MD and FRCP (Glasgow) qualification and 32 years of teaching experience, he has received various accolades, including the M G M Indore Prize for Best Paper in 1989, the Dowling Club Traveling Fellowship by the British Association of Dermatology (awarded twice), and the Ambady Oration at the National Conference of the Indian Association of Dermatology & Venereology & Leprosy (IADVL & L) in Chennai in 1995. Dr. Srinivas has authored approximately 220 publications and has made significant contributions to dermatology, including Photodermatology, Contact Dermatitis, and Dermatologic Surgery.

He is an active member of prestigious national and international dermatological organizations, having held positions like President of IADVL in 2012. Dr. Srinivas has organized important conferences and introduced groundbreaking



inventions such as the Bath Suit PUVA and Trichotillometer. His contributions have been recognized with Lifetime Achievement Awards from IADVL TN in 2021 and SAARC AAD in 2018, highlighting his enduring impact in dermatology.

Interviewer: Good morning, Dr. Srinivas. Thank you for taking time out of your busy schedule for this conversation. Our readers are curious about how you ended up in dermatology. Did you choose it, or did it choose you?

Dr. Srinivas: Well, it's a bit of both, actually. Initially, I wanted to pursue medicine, and I even secured a seat in a medical program. However, a twist of fate occurred when, through a court ruling, that seat was assigned to someone else, who happened to be a close friend of mine. It was quite ironic. This shift led me to dermatology, and oddly enough, my friend who displaced me later became one of my closest allies. So, whether it was destiny or luck, I can't say for sure.

Interviewer: Did you always dream of becoming a doctor since childhood?

Dr. Srinivas: Yes, from an early age, I had two dreams: to become a doctor and to become a teacher. I was fortunate that both of those dreams came true, and I ended up being both.

Interviewer: During your residency, did you have any role models or mentors who had a significant impact on you?

Dr. Srinivas: During my residency, one person stands out as a role model - Dr. Hemanta Kar. He was my senior and taught me the fundamentals of dermatology. He was also the former Head of the Department where I currently work. After that, another mentor, Dr. RPC Naik at Manipal, played a vital role. It took a considerable effort (and about seven to eight glasses of beer) for him to convince me to stop competing with postgraduate students for knowledge. He advised me to specialize in one or two areas and use my expertise to guide others, rather than trying to master everything. I needed to focus, become a specialist, and lead. I had a hot-headed attitude at that time, so it was quite a challenge to get through to me. But once we aligned our thinking, we managed to publish around 7-8 papers together in just a few months. Later on, he chose to go to Abu Dhabi, and at a young age, around 29 or 30, I became the Head of the Department and continued in that role. And then, I met Dr. Pasricha, who wanted to examine cashew nut workers. This started our association, and we eventually founded the Contact and Occupational Dermatitis Forum of India. During the day, we worked and debated, and at night, we had moments of fellowship and debate.

Interviewer: If you had to describe yourself as a resident doctor in three words, what

would they be?

Dr. Srinivas: I'd say I was eager, curious, and not always obedient. I never liked following the rules; I believe that rules are meant for fools.

It does not mean that there should be no rules, they are essential but rules should not stop or hinder one from undertaking a task on which an individual has faith. Skating on thin ice can be fun, albeit a bit risky.

Interviewer: Balancing residency and personal life can be challenging. How did you manage the demands of residency with your personal life?

Dr. Srinivas: I've never been one for elaborate or advance planning. I tend to go with the flow.



I have a saying, “Ganga baira hai, baite jao, jo hota hai, woh hota hai, jab jab jo jo hota hai, tab tab so so hota hai,” which roughly translates to “Go with the flow.” I didn’t plan too far ahead; I took things as they came, whether it was studying, traveling, watching movies, or even occasionally bunking. I just went with the flow of events.

Interviewer: Was there a particular incident during your residency that ignited your passion for dermatology?

Dr. Srinivas: Indeed, there was such an incident. I had to work on my thesis, and most people were exploring skin manifestations in conditions like diabetes and liver diseases. However, these topics didn’t pique my interest. That’s when I decided to contact the CLTRI (Central Leprosy Teaching and Research Institute) in Chengalpattu, a leprosy research institute, to study the effect of Dapsone on the excretion of rifampicin and vice versa. I took a month off from my professor and stayed at CLTRI for a month. During my stay there, I realized there was much I didn’t know about the subject. The institute had a library with back volumes of the International Journal of Leprosy and Leprosy Review journals, so I decided to read all of them and make notes. I also travelled to Pondicherry for a two-day trip, where I met trainees and attended leprosy classes with them. This experience not only helped me complete my thesis, but I even published it with my professor, Dr. Mohanty. This experience sparked my passion for research.

Interviewer: You became the Head of the Department at a very young age. How do you see the differences in dermatology residency now compared to your time?

Dr. Srinivas: The key difference now is the



accessibility of information. During my time, we had no guides, and there was no one to tell us what to do. The internet had not yet arrived, and everything wasn’t readily available at our fingertips. I recall one incident at JIPMER in Pondicherry where we had to write an article. To find references, we had to go to the library, which was a painstaking process. We had to search through stacks of volumes, hoping to find the one we needed. Oftentimes, the volume we were searching for was missing, and even if we



found it, the required page would be torn. We had to type our papers, which wasn't easy. I had a typist who struggled to type, and getting frustrated with her only made her type worse. Consequently, one paper had to be typed nearly 12 times. This experience taught me the value of hard work and determination.

Interviewer: Dr. Srinivas, in your opinion, what is the most exciting emerging technology in the field of dermatology today?

Dr. Srinivas: While many people find artificial intelligence exciting, I'm more focused on consolidating existing knowledge and improving what we already have. I believe that making small but meaningful improvements is crucial. I'm not aiming for groundbreaking innovations or Nobel Prize-level work. Instead, I'm interested in making small-scale innovations that can make medical care more affordable, help with diagnosis, and standardize practices. It's important to focus on the fundamentals and incremental progress. The latest technologies can be explored by the younger generation, and they can teach us.

Interviewer: Can you share any funny or memorable incidents from your residency days?

Dr. Srinivas: We had an amusing incident during our residency. Our professor had locked the latest edition books in an old wooden cupboard, but he had lost the key or didn't have it. Over time, we realized that white ants had managed to get behind the cupboard, and the students couldn't access the books. So, we broke the lock, and there were many white ants inside. I was tasked with cleaning and binding the books. I had to remove the white ants, dust the books, and salvage whatever we could. I'd give some for binding and keep some with me

to read while the others were being worked on. That's how I managed to read the latest books that weren't accessible to everyone. Since the professor trusted me, he didn't double-check. It shows that when people trust you, they tend not to question you.

Interviewer: Dr. Srinivas, how did your focus on niche areas like contact dermatitis and photodermatitis develop?

Dr. Srinivas: I don't give too much thought to what happens; things tend to develop naturally. When I came across articles on photo dermatology in the "Archives of Dermatology," it sparked my curiosity. The journal featured colorful advertisements with attractive women, showcasing phototherapy lamps. I wrote to them, and they sent me a quotation, but I knew very little about phototherapy at that time. The process was challenging, and it took us about four to five months to grasp phototherapy concepts fully. This included figuring out how to use templates to determine the minimal erythema dose, a term commonly used in journal articles. We had to learn from scratch, which led to our specialization in phototherapy. Similarly, for contact dermatitis, Dr. RPC Naik had ordered one kit, and by the time the quotation came, he had left. The medical director called Thimappayya, was an army man, he was tall, and I was short he towered over me and said, "Dr. Naik has left, you are too young to do these things. We cannot order now!". I got angry, this led to me making my patch test kit.

I collected all the chemicals by visiting various places, including the chemistry department, organic chemistry department, textile facilities, a rubber manufacturing factory, and the leather institute. Then in collaboration with our pharmacy man, I made all the antigens. I also

designed an Almira to keep the antigens safe. We took this, gauze piece, then sticking plaster and started the patch test.

We showed a revenue of some 15000 or 20,000 to the medical director.

'Banda khush hua', so he permitted me to order the kit. Then I made a loss of a few lakhs. One thing is people start believing you, then they don't check again.

But we did photo patch testing, patch testing, and footwear series, and published a lot of papers.

Interviewer: Let's switch to a rapid-fire round.

Q - If you could live anywhere for the rest of your life, where would it be?

A - Manipal.

Q - What is your biggest fear?

A - Ignorance.

Q - What's your favorite family vacation?

A - Recently, my wife and I went on a European tour.

Q - What makes you angry?

A - Nothing.

Q - Your favorite book?

A - "Moon and Six pence" by Somerset Maugham.

Q - The last movie you watched in theatres?

A - "Ponniyin Selvan."

Q - If you could have one meal for the rest of your life, what would it be?

A - Bisi Bele Baat.

Q. Which song would you sing for a karaoke night?

A - My favorite song is from "Sagina Mahto" - 'Sala mein toh sahab ban gaya'.

Q - Did you have any nicknames?

A - I had several nicknames. Some called me "Dhela" because of my large eyes. Others



called me "cat and rat" because my name had CR in it. In Rourkela, where I lived, my mother used to dress me in big coats, sweaters, and mufflers, earning me the nickname "cold man."

Q - If you could sum up your life in one song, which song would it be?

A - 'Main zindagi ke saath nibhata chala gaya.'

Interviewer: Coming to the end of the interview, what advice would you give to current residents?

Dr. Srinivas: My advice would be to ask questions. Don't just accept what's in books or journals or what others tell you. Question everything and try to generate studies or, at the very least, search the literature for answers. Don't accept anything at face value.



Dr. Jinisha Jain
Assistant Editor
Jawaharlal Nehru Medical
College.

Generalised Lichen Nitidus in Childhood

Introduction: In 1901, Pinkus published the first description of lichen nitidus as a chronic, papulosquamous eruption where a number of 1-2 mm, flesh-coloured, glossy, dome-shaped papules are present. Despite being asymptomatic, it occasionally can present with pruritis. It typically affects the genitalia, upper extremities, chest, abdomen and can very rarely spread to other parts of the body (1).

We present a girl with 2-year history of severely pruritic itchy skin-coloured papules all over her body.

Case Report : A 5-year-old girl presented with a 2-year history of an severely pruritic eruption that first appeared over the hands and upper extremities and gradually spread to involve the lower limbs and trunk. The patient was otherwise healthy, and there was no intake of any prior medications or a similar family history. Clinical examination revealed numerous 1–2 mm shiny and skin-colored papules over the face, hands, forearms, feet, legs and abdomen, particularly around the umbilicus with multiple foci of koebnerization apparent on the forearms

(Figs 1 & 2) The oral mucosa, nails, palms, soles and anogenital area were not involved.

Biopsy findings from one of the papules showed a focal granulomatous lymphohistiocytic infiltrate in the papillary dermis immediately subjacent to the epidermis clutched by the elongated rete pegs, thereby producing a “claw clutching a ball” picture. This confirmed the clinical diagnosis of lichen nitidus (Fig. 4). The patient was started on potent topical corticosteroids; subsequently, she was lost for follow-up.



Figure 1-
Shiny papules over back



Figure 2-
Koebnerisation



Figure 3- Generalised
skin-coloured papules

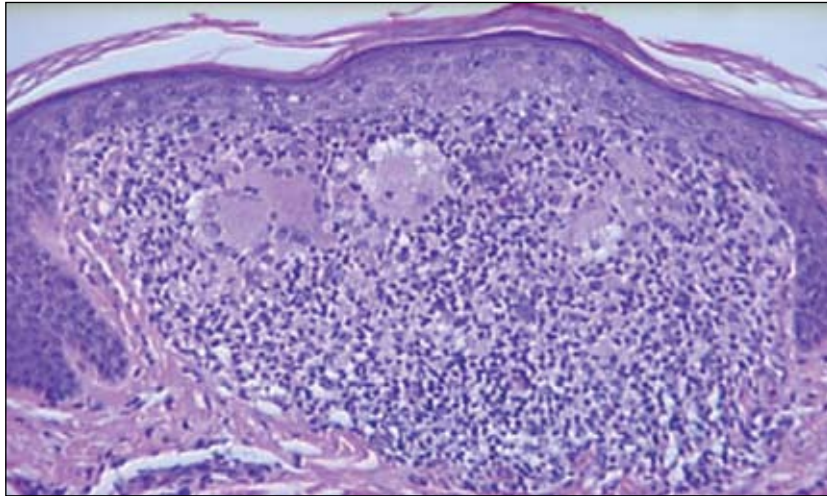


Figure 4- Claw clutching ball appearance

Discussion : Generalized lichen nitidus is quite rare in children. Additionally, a number of other unusual varieties, such as confluent, vesicular, hemorrhagic, familial, palmar and plantar, follicular, perforating, and linear forms, have been described. Clinical cases of nail and oral involvement have been documented in the literature⁽¹⁾.

An important point to remember is to differentiate this entity from Lichen scrofulosorum which is clinically characterized

by tiny, skin-colored, perifollicular papules arranged in groups; normally, they have a smooth surface, but occasionally spiny projections with fine scales may be seen. Histology shows non-caseating, epithelioid cell granulomas in upper dermis and around dermal appendages⁽²⁾.

Because the clinical course is unpredictable and the majority of patients have spontaneous clearing within several years, treatment is primarily symptomatic. PUVA therapy and astemizole have been effective in generalized lichen nitidus. ⁽¹⁾

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A rare case of Acrodermatitis Continua of Hallopeau - case report

Introduction : Acrodermatitis continua of Hallopeau (ACH) is a rare, sterile pustular eruption of one or more digits. The condition typically affects the tip of a finger rather than a toe and manifests as tender pustules and underlying erythema. ACH is regarded as a variant of pustular psoriasis. The chronic and progressive nature of ACH frequently leads to irreversible consequences such as onychodystrophy, which can cause anonychia, osteitis, and osteolysis of the distal phalanges.^[1] As a result of the rarity of reports and the intricacy of ACH, this syndrome has a wide range of potential diagnoses and can be difficult to treat.^[2]

Case report : A 68-year-old male patient presented with painful pus-filled lesions initially over the right thumbnail and subsequently evolved to involve bilateral finger and toenails over a span of four months. These lesions burst open to leave behind raw areas. Clinical examination revealed multiple well-defined erythematous hyperkeratotic plaques on the lateral aspect of the bilateral index finger (figure 1 B). Dystrophy of bilateral finger and toenails present. Erythema, crusting, and focal erosions were present (figure 1 A). Clinically the differential diagnoses of irritant contact dermatitis, and hand eczema were considered. As misdiagnosed to be a case of paronychia his prior treatment with oral antibiotics had failed. Histopathological examination revealed parakeratosis, acanthosis, lymphocytic and neutrophilic exocytosis, and spongiosis (figure

2). Based on the clinical and histopathological findings the diagnosis of acrodermatitis continua of Hallopeau (ACH) was reached.

In our center, we have started the patient on prednisolone 30mg with gradual tapering, oral colchicine 0.5mg bd as well as a topical corticosteroid and antibiotic combination. After one month of initiation of treatment, he showed dramatic improvement. (Figure 3) He continued to improve clinically thereafter.

Discussion : Acrodermatitis continua of Hallopeau, also known as acrodermatitis perstans and dermatitis repens was first described by Hallopeau in 1980. Precise pathophysiology and incidence are not known. It begins as erythema that develops into pustules over the distal digits. Atrophic skin changes and paronychia and subungual involvement of the nail bed are common. As the condition deteriorates, the majority of patients experience a chronic, relapsing course involving the proximal digit.^[3]

Due to its pus-filled lesions, which may resemble bacterial, fungal, or viral paronychia, ACH is frequently misdiagnosed. Depending on the patient's age and comorbidities, differential diagnoses include secondary infected contact dermatitis, dyshidrotic eczema, paraneoplastic disease. Vesicopustular nature of ACH makes herpetic whitlow another differential diagnosis. Dermatophytosis can present with scaly erythema resembling ACH. Pemphigus vulgaris, an autoimmune disorder, can mimic ACH by causing digit erosion and inflammation.^[4]

PPP is the condition that should be compared and contrasted with ACH the most. Fortunately, these related conditions can be distinguished by a few key characteristics. First, ACH frequently follows trauma, whereas PPP rarely involves a history of injury. Second, PPP does not always affect the nails and is typically non-suppurative, whereas suppurative nail involvement is an early and distinguishing feature of ACH. Thirdly, ACH tends to be unilateral, restricted to a small number of digits, and has an irregular distribution for a long time, whereas PPP tends to be bilateral and symmetrical. Last but not least, PPP does not include characteristics like osteolysis or soft tissue sclerosis as described in ACH.^[1]

ACH shows up histologically the same as pustular psoriasis, with subcorneal neutrophilic pustules, spongiform pustules, and lymphohistiocytic infiltrate. The papillary dermis and epidermis typically show severe

atrophy and thinning in chronic ACH lesions. The nail matrix is constantly involved and normally shows moderate acanthosis, lymphocytic and neutrophilic exocytosis, and spongiosis.^[1]

In our case, we treated the patient with oral corticosteroids, and oral colchicine making use of their anti-inflammatory nature for treating ACH. Other treatment options available are methotrexate, cyclosporine, retinoids like acitretin, or biologics like TNF-alpha inhibitors (e.g., etanercept, adalimumab) or IL-17 inhibitors (e.g., secukinumab, ixekizumab). Phototherapy, both narrowband UVB and PUVA (psoralen plus UVA) has shown some effectiveness in improving symptoms. Phototherapy is usually done in conjunction with other treatments.^[5]

This article is presented as an eye opener into the diagnosis of acrodermatitis continua of Hallopeau so that in the future it can help fellow residents in arriving at an early diagnosis.

Legends for the figure



Figure 1 A- erythema, erosions, nail dystrophy of bilateral fingernails.



Figure 1 B- hyperkeratotic plaques present over the lateral aspect of the index finger.

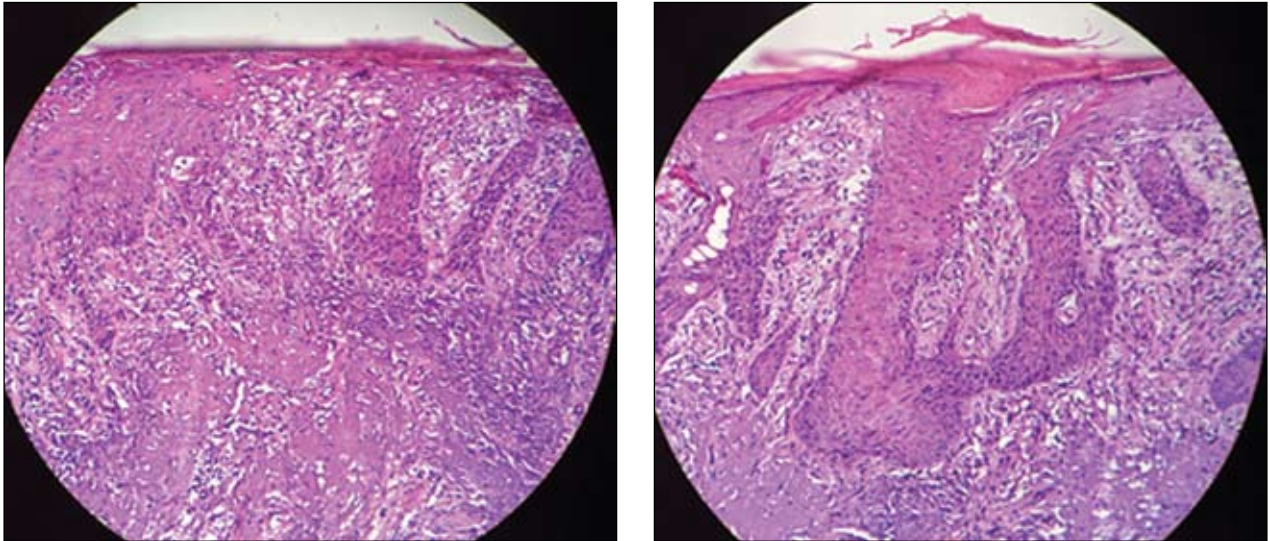


Figure 2- parakeratosis, acanthosis of the epidermis with neutrophilic spongiosis, and dermal lymphocytic infiltrates are noted on the H&E stain in 10x magnification.



Figure 3- Resolution of the lesions one-month post-treatment.

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Brief Report : Lip Biopsy for a lesser-known indication!

18-day-old male neonate, born of a non-consanguineous marriage, presented to us with diffuse hyperpigmentation of the skin, yellowish discoloration of palms and soles, seizures, and anasarca for 1 week. Cutaneous examination showed diffuse pigmentation of the skin affecting the whole body, along with increased pigmentation of the dermatoglyphics over the palms, soles, oral mucosa, gums, and the nail bed. The external genitalia showed normal development for age. Initial laboratory investigations revealed low platelet count, prolonged partial thromboplastin time/prothrombin time (PTT/PT), and increased total and direct bilirubin. All possible causes of neonatal jaundice were ruled out. The diagnoses of infection and metabolic errors were excluded. Abdominal magnetic resonance imaging (MRI) examination was not confirmatory of hemochromatosis. Then a lip biopsy was done which demonstrated iron deposits in the endothelium of the minor salivary glands. Hence a diagnosis of Neonatal Hemochromatosis (NH) was made and the neonate was planned for a liver transplant.



Figure 1-
Minor salivary gland biopsy

Discussion:

Neonatal hemochromatosis (NH) is a rare clinical condition occurring most commonly due to Gestational Alloimmune Liver Disease (GALD) in which severe liver disease in the newborn is accompanied by extrahepatic siderosis.

Diagnosis of NH rests upon demonstrating extrahepatic siderosis. Salivary gland biopsy can be performed to diagnose diseases of salivary parenchyma, such as degenerative and inflammatory diseases like Sjogren's disease, amyloidosis, and sarcoidosis.

Recent studies have shown that early diagnosis and treatment can improve survival in neonates with Hemochromatosis.

Prior to salivary gland pathology, a diagnosis of NH was often delayed, rendered only after the usual causes of neonatal liver failure had been excluded. Few cases of salivary gland hemosiderosis in NH have been reported in the literature.

As dermatologists, we have the advantage of performing a relatively simple procedure that can expedite care.



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Advances in Keloid Management : Emerging Treatments and Energy-Based Devices

Keloids represent an excessive growth of fibrotic tissue beyond the initial injury site, resulting from impaired wound healing. These abnormal tissue formations frequently lead to functional, and or psychosocial concerns for patients.

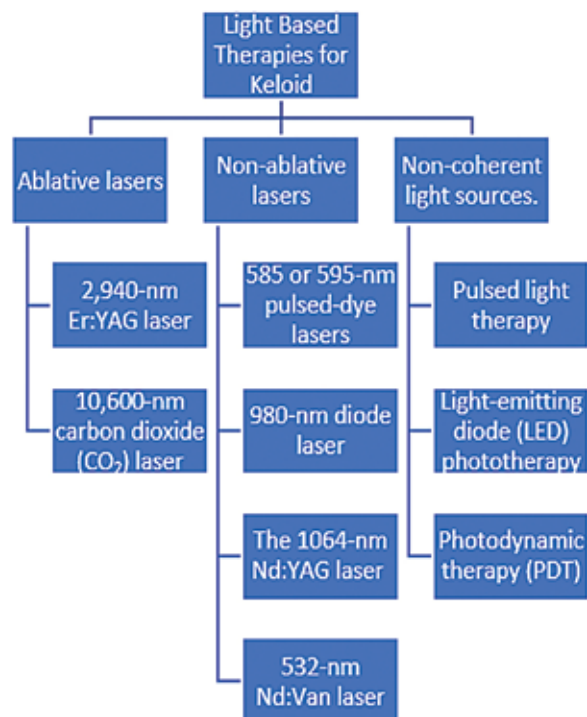
Treatment options for keloids encompass a range of approaches, including intralesional or topical corticosteroids, various intralesional therapies such as 5-fluorouracil (5-FU), bleomycin, and interferon as well as surgical excision. Additional methods include topical imiquimod, compression, cryotherapy, radiation, silicon sheeting, and laser or light-based therapies. It's worth noting that even with combination therapy, keloid recurrence remains a common challenge.

Within the realm of laser and light-based therapies for keloids, these can be broadly categorized into three groups: ablative lasers, non-ablative lasers, and non-coherent light sources. A laser can be classified as ablative or non-ablative according to its effect on tissue. Ablative lasers remove part or all of the tissues on which they are applied. Non-ablative lasers cause coagulation and necrosis of the capillaries, through the absorption of laser light energy by intravascular haemoglobin. The destruction of blood vessels decreases blood flow to the treated area, with a consequent hypoxia. Changes occur in the tissues as a result of the hypoxia, with the production of new collagen, heating of collagen

fibres, dissociation of disulphide bonds and collagen fibre realignment.

Various skin structures require specific laser wavelengths for effective treatment. Laser beams with matching or similar wavelengths to the target structure (chromophore) are crucial. These lasers employ "selective photothermolysis" to selectively destroy the matching structure within the skin.

The patient's skin type, the energy released by the device in a certain area (also called fluence), the spot size of the laser light and the speed with which this beam reaches the target, are all factors that influence the results obtained with laser therapy.



DEVICE	MECHANISM OF ACTION	SETTINGS	COMMENTS
ABALATIVE LASERS			
Carbon Dioxide Laser	Emit beams absorbed by water in skin resulting in reduction in the lesion volume by local tissue destruction.	Continuous mode 7–23 W. 0.2-mm to 1.0-mm spot size. Super pulse mode at 5–8 Hz and 200 - 250 μ s duration or 30 Hz and 300 μ s duration. 3-mm spot size.	High Recurrence rates (due to incomplete removal of keloidal fibroblasts) CO2 monotherapy may in fact worsen keloids, direct application of topical steroids to keloid scars immediately after fractionated CO2 treatment minimizes side effects associated with intralesional steroid treatment and evenly distributes the steroid to the desired tissues.
Erbium-doped: Yttrium, Aluminum, and Garnet (Er:YAG)	Emit beams absorbed by water in skin resulting in local tissue destruction.	3.0–4.0 J/cm ² thermal energy density. Spot size of 5-mm. Additional ablative energy at 1.0–3.0 J/cm ² depending on the thickness of the scar.	Daily application of silicone gel did not improve the effect of Er:YAG laser therapy
NON ABALATIVE LASERS			
Pulsed-dye Laser	585 or 595-nm PDL targets oxyhemoglobin and melanin, with a potential risk of pigmentary alterations. PDL treats keloids by selectively damaging the blood vessels supplying the scar.	5.0–7.5 J/cm ² energy density; 5-7mm spot size; pulse duration 250 msec	Combination intralesional therapy plus PDL may be more effective than PDL monotherapy. PDL has an approximate 1.2 mm depth of penetration and efficacy in thicker keloids may be limited. PDL may also resolve scar-associated symptoms such as pruritus.
Neodymium-doped: Yttrium, Aluminum and Garnet Laser (Nd:YAG)	Primarily treat keloids by damaging deep dermal blood vessels and potentially suppressing fibroblast collagen expression. Non-contact mode Nd:YAG does not cause discernible changes to vascular endothelial cells or fibroblasts, but may function by inducing plasma protein leakage or changes in the collagen fiber fascicles.	70 W, 60 J/cm ² power density, 1 cm ² spot area. 1–2 week intervals between treatments	Nd:YAG is a delicate procedure because under-treating can lead to suboptimal results, and over-treating may lead to recurrence or worsening of the keloid. Nd:YAG may be a superior non-ablative option compared to PDL to treat thicker keloids, as Nd:YAG penetrates deeper into the skin. Nd:YAG can also be used interstitially, in large keloids, by placing the bare laser fiber inside the keloid.



Neodymium-doped: Vanadate Laser	532-nm Nd:Van laser may primarily treat keloids by damaging deep dermal blood vessels and potentially suppressing fibroblast collagen expression.	532-nm diode-pumped Nd:VAN laser; 6–7 J/cm ² energy density; 2–3 ms pulse duration; 10 × 10-mm spot size. Treated every 4 weeks with an average of 8.5 treatments per patient.	
980-nm diode Laser	The 980-nm diode laser targets hemoglobin and melanin	Laser pulses are delivered interstitially. Single repeated mode of 4 s duration; 5 W power; 20 J/cm ² energy density; 5–9 pulses applied depending on keloid size and pigmentation.	
NON COHERENT LIGHT SOURCES			
Light-Emitting Diode (LED) Phototherapy	Modulates intracellular signaling via mitochondrial cytochrome C oxidase. LED phototherapy, at both red and near-infrared wavelengths, can suppress fibroblast proliferation and may provide a mechanistic foundation for future treatment of keloids	Daily 15 minute home treatment with non-thermal, non-ablative NIR LED 805 nm; 30 mW/cm ² power density; 2.5 cm treatment distance. Treated for 30 days following surgical revision or CO ₂ laser resurfacing of keloid scar.	The use of LED phototherapy as an adjunctive therapy may prove to be a safe, cost-effective, and convenient method for at-home care of keloid scars.
Intense Pulsed Light (IPL)	IPL emits non-coherent, pulsed light that targets pigmentation and vasculature.	Cutoff filters of 550–590 nm; 30–40 J/cm ² energy density; 2.1–10 ms pulse duration; 10–40 ms pulse delays. Each patient received IPL therapy every 2–4 weeks with a minimum of six sessions.	IPL may cause pigmentary alteration and burns and therefore caution is advised when treating skin types IV to VI.
Photodynamic Therapy	PDT involves the use of photosensitizers to generate cytotoxic effects when exposed to light, potentially affecting extracellular matrix synthesis, degradation, cytokine, and growth factor expression.	Topical MAL/ALA applied to keloid for 3 hours; irradiated with 633 nm LED.	Penetration depth is a limitation that may need to be addressed to effectively treat thick keloids with PDT, as ALA and MAL penetrate approximately 3 mm deep PDT may be better utilized as adjuvant therapy following surgical excision as a prophylactic measure in patients predisposed to keloids

EMERGING TREATMENT OPTIONS

- Radiofrequency tissue volume reduction (RFTVR) is a surgical technique that induces extensive fibrosis at the treated tissues. Subcutaneous anaesthesia is used. The Cut/ coagulation (blend mode) used with a maximal temperature of 90 Degrees Celsius and a power output of 12 W. The noninsulated part of the electrode tip is inserted into the keloid, and the energy applied into the keloid tissue until a maximal temperature was reached. The number of sessions range between 3 and 5 sessions (8 weeks apart) depending on the keloid size. Patients are instructed to use topical and systemic antibiotics for 1 week after the procedure. Each session of RF is followed by 1 session of IL steroid injection (triamcinolone 1:2 saline, i.e., 10 mg/mL) after 8 weeks; this IL steroid injection session is repeated every 3 months for 3 sessions, then after 6 months for 1 session, to avoid any tendency of recurrence. The IL treatment is generally well tolerated. Minor bleeding from the penetration points may occur disappears after 5 to 15 minutes of compression. It is an easy procedure with acceptable cosmetic outcome and less rate of recurrence.
- Electrical stimulation (ES) has been used for scar treatment - A novel device called Fenzian system, which produces degenerate waves, was developed recently and shows promise in curing keloids and hypertrophic scars. Suppression of excessive collagen I formation is a major mechanism behind the anti-keloid properties of ES.
- Microneedle physical contact - Microneedles are able to penetrate the stratum corneum without contacting the nerves in the dermis. Various types of microneedles, such as solid, coated, dissolving and hollow forms, exist. On the whole, these devices cause less pain, infection and injury compared with conventional injections and deliver drug effectively evenly.
- Extracorporeal shockwave therapy - ESWT has two explained mechanisms: (1) affecting pain receptors and (2) generating micro-trauma and releasing cytokines to promote tissue repair.

This exposure leads to significant reductions in TGF- β 1, α -SMA, collagen-I, fibronectin, and TWIST1 levels. Conversely, E-cadherin expression increased, indicating suppressed epithelial-mesenchymal transition (EMT). ESWT was suggested to have anti-scarring effects through EMT suppression. Shock waves mechanically disrupt tissue through cavitation. These waves cause microscopic injuries and disintegrate collagen fibers, promoting scar remodeling.

These innovative technologies offer new avenues for managing keloids, potentially leading to improved aesthetic and symptomatic outcomes while reducing the likelihood of keloid recurrence.



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Throwing light on use of Glutathione as a skin lightening agent

Throwing light on use of Glutathione as a skin lightening agent

INTRODUCTION

An obsession with lighter skin tones is still prevalent in Asia. Asian people would like to be whiter because skin color becomes synonymous with social class. White skin people are perceived as a superior social class. The direct implication of this craze is the exploitation of topical agents originally developed for the treatment of hyperpigmentation, such as skin-lightening therapies.^[1]

Topicals containing hydroquinone, alpha and beta hydroxy acids, tretinoin, arbutin, vitamin C, soy extracts, and concoctions of multiple ingredients, including newer cosmeceuticals, are now in vogue for the treatment of facial melanoses. The local adverse effects of these agents and the quantity required for large surface area application constitute major limitations of this approach. Understandably, the impact of such locally applied topicals remains limited to the application site alone without any notable systemic skin-lightening effect.^[2]

The quest for a systemic skin-whitening agent ensues. Oral antioxidants, such as vitamin C, vitamin E, tranexamic acid, flavonoids, and various botanical extracts have been tried in melasma and disorders of hyperpigmentation, but none has proven to provide an overall skin-lightening effect^[2]

However, glutathione when used as a systemic skin-whitening agent has shown promising results.

What is glutathione?

Glutathione (γ -glutamyl-cysteinylglycine) is a small, low molecular weight, water-soluble thiol-tripeptide formed by three amino acids (glutamate, cysteine, and glycine).^[2]

What are its physiological functions?

- (i) Scavenging of free radicals, most importantly hydrogen peroxide.
- (ii) Translocation of amino acids across cell membranes.
- (iii) Maintenance of the sulfhydryl groups of proteins and other molecules.
- (iv) Detoxification of xenobiotics.
- (v) Participation as a coenzyme in certain important processes of cellular metabolism.^[2]

What are its sources?

- (i) Endogenously produced in different tissues of our body.
- (ii) Exogenous sources include Tomatoes, avocados, oranges, walnuts, and asparagus.
- (iii) Whey protein is another rich source of glutathione.
- (iv) Pharmaceutical formulations.^[2]

How does it work as skin lightening agent?

Glutathione, being a potent antioxidant in addition has anti-melanogenic properties which lead to skin lightening effect.

The skin-lightening effect results from the



interruption of tyrosinase which plays an important role in skin pigmentation.

Such an effect has been proposed through several mechanisms.

- (i) Inactivates tyrosinase by chelating the copper ion.
- (ii) It interferes with the tyrosinase transportation to pre-melanosome.
- (iii) It scavenges free radicals and peroxide which blocks tyrosinase activation.
- (iv) It switches skin pigmentation path-way from eumelanin (darker pigment) to pheomelanin (lighter pigment).^[2,3]

Is it a US: FDA-approved drug for skin-lightening?

Not yet.

What are its approved indications in India?

The indications approved by the Central Drugs Standard Control Organization (CDSCO) in India are:

- (i) Alcoholic fatty liver,
- (ii) Alcoholic liver fibrosis,
- (iii) Alcoholic liver cirrhosis, and
- (iv) Alcoholic hepatitis^[4]

What is the route of administration for the purpose of skin lightening?

Topical (creams, face washes) Oral (capsules and sublingual/buccal tablets) Intravenous injections.^[2]

Is it available as an over-the-counter drug?

Topical and oral formulations are available as over-the-counter drug

Can it be used as mesotherapy?

Despite the lack of published literature on the efficacy and methodology, mesotherapy is widely practiced by dermatologists for

the treatment of melasma and other facial melanoses as monotherapy, or in combination with ascorbic acid, vitamin E, and tranexamic acid.^[2]

What is the major limitation of topical formulation?

Poor cutaneous absorption owing to the larger size of the molecule.

What are the doses of oral glutathione?

It is widely available as 250mg, 500mg, and 1000mg tablets/capsules

Which one is better among buccal lozenge and tablet/capsule?

The buccal route, as it is not destroyed by gastric acid and enzymes in contrast to capsules/tablets.^[2]

When can you expect results after intake of oral formulation?

Within 4-8 weeks.^[5]

What are the limitations of the oral route compared to the IV route?

Oral formulation has lesser bioavailability.

What are the doses of IV formulations available?

Commonly used doses are 600mg and 1200mg available in vials.

What is the frequency of administration of IV formulation?

600-1200mg/day IV once weekly or twice a week until adequate result is achieved.

Followed by a maintenance phase of monthly Injection.^[3]

Why should there be a glutathione free interval?

It is recommended to withhold Injection glutathione for 4-5 months in order to replenish

to depleted body stores.

What are the advantages of IV formulations?

Highest bioavailability compared to other formulations
Faster results

What are the adverse effects of IV Glutathione?

- (i) Cutaneous - Ranging from skin rashes to serious and potentially fatal Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN).
- (ii) Severe abdominal pain in patients receiving twice-weekly IV glutathione
- (iii) Thyroid dysfunction
- (iv) Kidney dysfunction with potential for development of renal failure
- (v) Liver dysfunction
- (vi) Lethal complications-Air embolism, blood-borne infections and potentially fatal sepsis stemming from incorrect technique of injections by untrained staff, use of unsterile or used needles [6]

Does it have skin lightening effect all over the body?

It shows skin lightening effect in several body regions, both sun-exposed (the face and the extensor surfaces of the forearms) and sun-protected skin of the upper arms.[7]

Is the skin-lightening effect permanent?

No. Maintenance doses have to be given for persistent skin-lightening effects.[8]

Is it effective for everyone?

No. A certain proportion of people respond partially to Glutathione and in few others don't respond at all

Can it be used in Pregnancy and lactation?

No. Due to a lack of evidence-based studies it's

better avoided in Pregnancy and lactation.

What is the role of glutathione in skin disorders other than hyperpigmentation?

A decrease in the cellular and serum levels of glutathione has been speculated to be associated with the pathogenesis of autoimmune and inflammatory dermatoses that include psoriasis, vitiligo, alopecia areata, polymorphic light eruption, and acne vulgaris.[2]

Conclusion

The role of skin color in daily life is important, especially for women, as it may become one's charm. Its sociopsychological significance may exceed its biological function, even to the extent of causing cosmetic problems, resulting in a lower quality of life and low self-esteem. Nowadays, skin-whitening agents, either in topical, oral, or intravenous preparations, are widely available in markets. Glutathione is one such skin lightening agent available in the market in different formulations. Studies have shown that its Intravenous formulation is most effective as a skin lightening agent however its adverse effects and cost limit its use in the general population.[8]

Furthermore, skin color will return to its original state following the withdrawal of glutathione consumption. Hence, long-term effects are unsustainable. More research needs to be conducted in order to investigate long-term adverse effects and the time needed for skin color to return to its original state following drug withdrawal.[8]



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BUBBLE OF GRATEFULNESS

Every morning I wake up, I decide to be Grateful. Grateful to be present where I am both mentally and physically. Then it bursts. The bubble of gratefulness. Someone says something mean. Someone who had been yours is on the other team. Nothing goes your way. All your actions are questioned. Not by anyone else but you.

The moment the feeling of unworthiness settles in.

There s a voice. That says, its always better when it doesn't happen your way, cause them that's God's way.

I turn around to locate my mother. Cause she always says that.

I dont see her around.

The broken bubble of Gratefulness now surrounds me with tears.

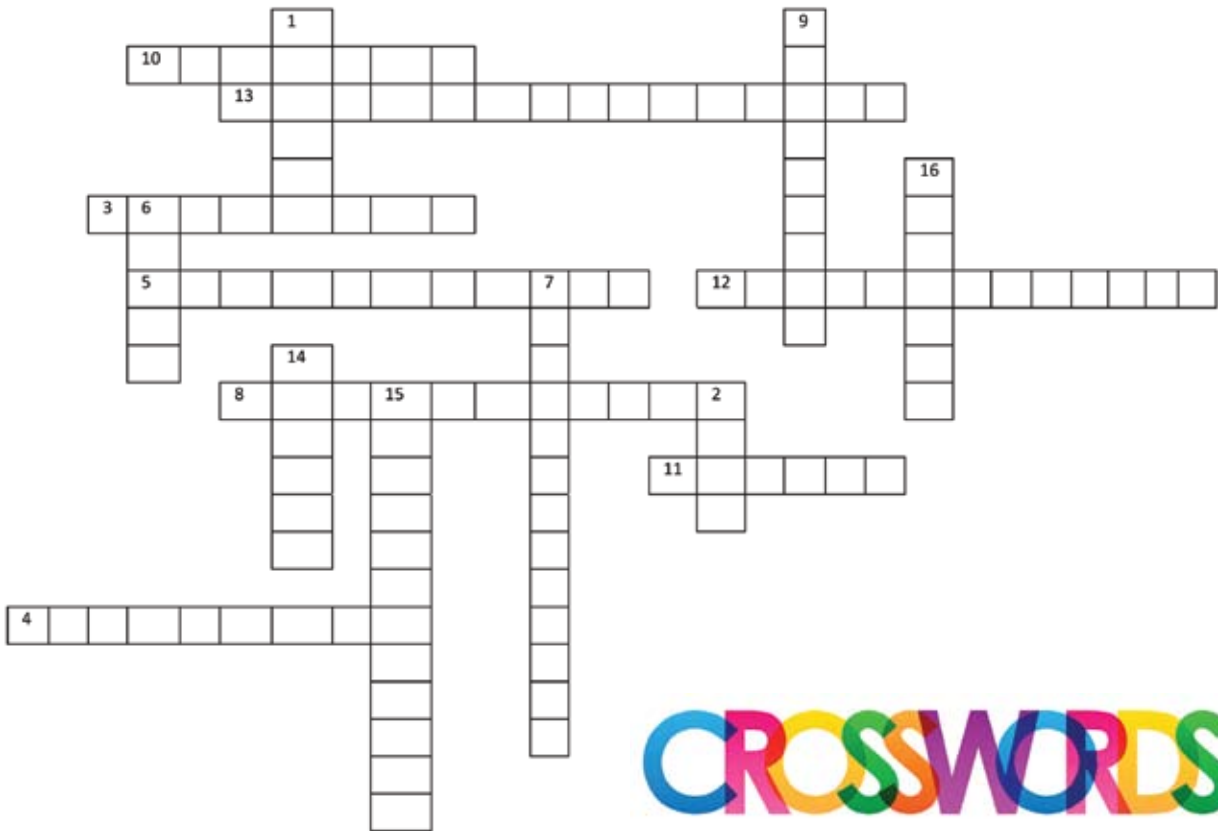
The voice I always longed for was always within me.

The tears are now brushed off my face, leaving room for a gleaming smile.

To wake up to one more day of Gratefulness !



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CROSSWORDS



Clue to question 4



Clue to question 8

Crossword clues

Across

3. Black sausage poisoning is also known as
4. Elevation of the lateral end of the eyebrow due to uneven paralysis of frontalis muscle is _____ brow
5. I am a saturated dicarboxylic acid found in wheat and barley. I have bacteriostatic, anti-fungal and anti-mitotic activity. Who am I?
8. Complication of MPG at recipient site- _____ appearance

10. Modified skin grafting technique where dermabrasion is done following the application of thick antibiotic ointment and this mixture of entrapped cells and ointment is then transferred to recipient site
11. A solution which is a mixture of lignocaine, adrenalin and sodium bicarbonate diluted in saline used in liposuction
12. An audible popping sound heard during tattoo removal using Q switched laser is due to _____ effect
13. Chemical used on RO method for laser tattoo removal

Vertical

1. Chemical having antimicrobial, haemostatic action used in chemical matricectomy of nail
2. Topical 2.5% lignocaine + 2.5% prilocaine constitutes
6. Which peel has 20% salicylic acid, lactic acid, glycolic acid, willow bark and licorice root?
7. The technique of injecting fillers in multiple threadings in horizontal and vertical directions to create a grid is known as
9. In NCECS the epidermis is separated from the dermis in which media?
14. Blue colour of tattoo is due to the presence of which element
15. Semisolid form of platelet poor plasma formed after heating in a water bath
16. Shape of the follicular unit is



Dr Meghana C B

- Answers**
1. Phenol (88%)
 2. EMLA
 3. Botulinum
 4. Quizzical brow (Dr Spock's brow)
 5. Azelaic acid
 6. Obagi peel
 7. Cross hatching
 8. Cobblestone
 9. Dulbecco's
 10. Jodhpur technique
 11. Klein's solution
 12. Photoacoustic effect
 13. Perfluorodecalin
 14. Cobalt
 15. Biofiller
 16. Pyramid

ಈ ಕಂದು ಕೆನ್ನೆ

ಸೂರ್ಯನ ಪ್ರಜ್ವಲ ಕಿರಣಗಳು ,
ಚಂದ್ರನ ಚಂದದ ಚರ್ಮಕ್ಕೆ ಚುಂಬಿಸಲು,
ಅಂದದ ಮುಖವ ಮರಿಚಿಸಲು,
ಕಂದು ಬಣ್ಣದ ಭಂಗನು ಬರಿಸಲು,
ಈ ಕಂದು ಬಣ್ಣಕ್ಕೆ ಅಂದವ ತರಲು,
ಪ್ರಜ್ವಲ ಕಿರಣಗಳ ಪ್ರಭಾವ ಅಳಿಸಲು,
ಇರುವೆವು ನಾವು.

ಇದು ಭಂಗು, ಇದಕ್ಕಿದೆ ನಮ್ಮಲ್ಲಿ ಮದ್ದು
ಬನ್ನಿ ನಮ್ಮ ಚರ್ಮ ವೈದ್ಯರ ಹತ್ತಿರ,
ಮಾಡುವೆವು ನಿಮ್ಮ ಮುಖವನ್ನು ಬಲು ಸುಂದರ,

Betnovate ಹಾಕಬೇಡಿ,
Quacks ಮಾತು ಕೇಳಬೇಡಿ
ನಿಮ್ಮ ಸುಂದರ ಮುಖವ ಹಾಳು ಮಾಡಿಕೊಳ್ಳಬೇಡಿ.



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EAR LOBE REPAIR

INTRODUCTION

Piercing of the earlobes has been performed in both sexes for thousands of years for social, religious, and cosmetic purposes in the most primitive as well as the most affluent cultures.

It is common in women and men adorning themselves with an array of earrings of different shapes and sizes.

Ear piercing ranges from single piercing to multiple piercing, unilateral to bilateral, and earrings also come in all shapes and sizes with different materials and weights. Many patients present with complications due to wearing heavy rings or sudden or prolonged pulls.

Acquired clefts or splitting of the earlobes commonly occur from prolonged traction of heavy earrings, pressure necrosis from the clip-on earring, Children pulling on an adult's earring, inadvertent snagging of an earring with a hairbrush, and altercations are common causes of traumatic earlobe clefts.

Torn earlobes or cleft earlobes can be classified as

1. Partial Cleft,
2. Complete Cleft, And
3. Multiple Clefts.



REPAIR TECHNIQUES :

NON SURGICAL

- TCA 90%

SURGICAL

- Excision
- Punch excision
- Wedge excision with Z-plasty
- Excision f/b unilateral Z-plasty
- Excision f/b unilateral Z-plasty and advancement flap

NON SURGICAL :

- 90%TCA peel is applied inside the partial cleft until frosting appears.
- No neutralization is required.
- Occlude the cleft with micropore tape until complete cicatrical adhesion is achieved.
- Multiple sessions at weekly intervals may be required.
- The disadvantage is scar formation which is weak and prone to recurrence.

SURGICAL

Various techniques provide a good, cosmetically acceptable & stronger scar.

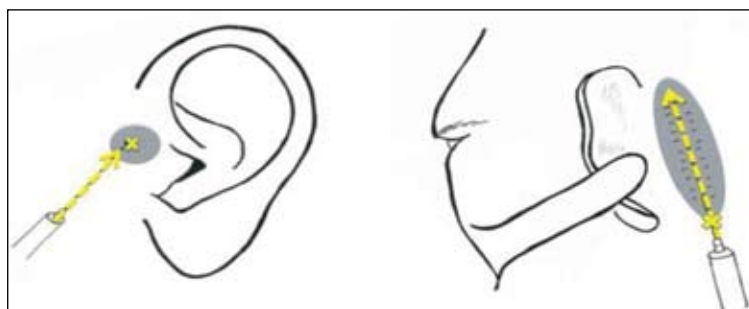
If the cleft is partial with the earlobe intact it is always preferable to convert to complete cleft.

Lobe thickness is an important factor before choosing a technique.

A lobe thickness of less than 4 mm has a chance of elongation at the piercing site post-surgery.

ANESTHESIA

- All ear lobe repairs are performed under local anesthesia.
- Infiltration is done by introducing a 26G needle at the base of the ear and directed anteriorly towards the tragus and 1-2% lignocaine is injected.
- The needle is injected posteriorly from the same distance to obtain a complete block.



PARTIAL CLEFT REPAIR:

Various techniques have been used in partial cleft repair. They are -

- Excision f/b Simple repair
- Punch excision with simple closure
- Reiter and Alford technique
- Wedge excision with Z plasty

1. Excision f/b Simple repair:

- The margins of the cleft are excised with blade no 15 on the anterior and posterior margins.
- Opposing edges are sutured from side to side with simple interrupted sutures with 5-0 or 6-0 proline.
- Hemostasis is achieved by pressure.
- Antibiotic dressing is done.



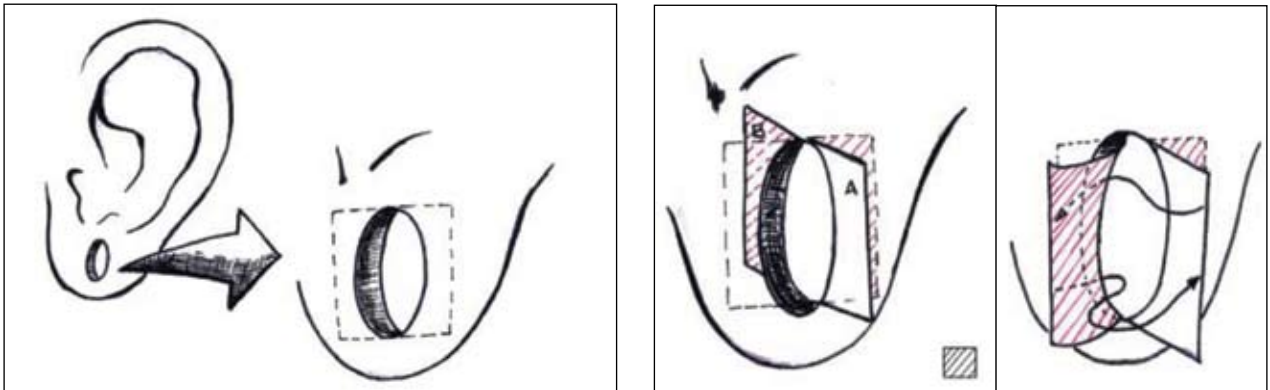
2. Punch excision(defects < 4mm) with simple closure:

- Ear lobe is stabilized with chalazion forceps.
- The elongated slit is removed by punch excision followed by a simple wound closure.



3. Reiter and Alford technique:

- The flaps created have pedicles along the edge of the slit, one in front at the right side and another in the back at the left side of the lobe.
- The flaps are rotated as saloon doors and each one will cover the raw area of the other when sutured, making the cleft disappear.



COMPLETE CLEFT REPAIR (without preservation of piercing site)

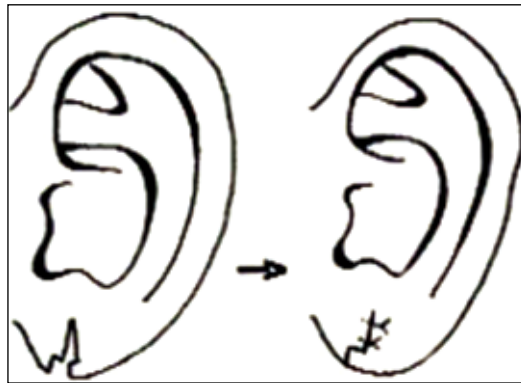
- A simple way to repair is to incise the cleft with an inverted 'V' shaped excision.
- Once excised, the anterior and posterior edges of the skin are reapproximated with a straight-line closure.



- Full thickness Z plasty for complete clefts can be done for ear lobe thickness > 4mm.
- For ear lobes < 4mm thick partial thickness Z plasty on the lateral surface of the earlobe and a linear closure on the medial side can be done.



- Creation of an L-shaped flap on the medial or lateral side of the excised cleft and a complementary L-shaped defect on the other side is done.
- The flaps are then sutured to get a full closure of the cleft.



COMPLETE CLEFT REPAIR (with preservation of piercing site):

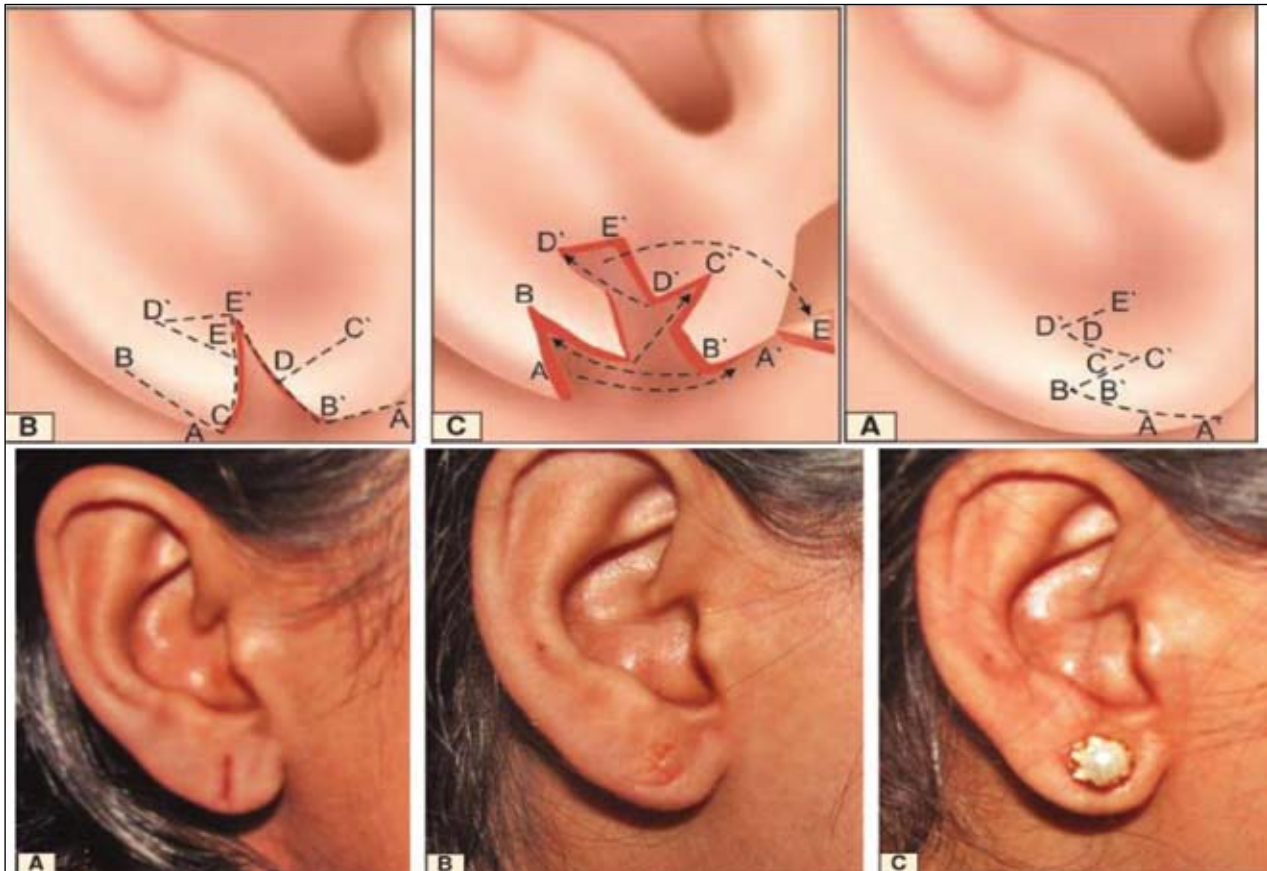
1. Pardue's technique:

- The cleft edges are excised, and the skin of the upper portion of the orifice at one of the sides is preserved.
- A flap is created with that portion, which is rotated like a snail towards the opposite side and then sutured with nylon, with internal stitches through the dermis of its lower end at the prior orifice raw corner, forming a new orifice.
- The edges are closed with simple sutures from the anterior lobe to the posterior.



2. Excision f/b Unilateral Z plasty and advancement flap:

- Two unequal, unilateral Z plasties are transposed in a superior direction.
- An incision on the posterior limb of the cleft bisects the limb, using the lower third as the advanced flap and the upper two-thirds become the lower unilateral Z plasty.
- An incision on the anterior limb of the cleft creates a second unilateral Z plasty.
- Inferior border of the anterior limb of the cleft is de-epithelialized to accept the advancement flap.



Postoperative care:

- Systemic antibiotics for 7-10 days
- NSAIDS for 5 days
- Suture removal after 5-7 days
- The patient is advised to wait for a minimum of 3 months before ear piercing.

Complications:

1. Depressed linear scar
2. Inferior margin notching of the lobe.
3. Post-operative infection.
4. Keloid

Prevention of ear lobe tears:

- Avoid wearing heavy earrings for a long time
- Avoid wearing earrings while sleeping.
- Avoid repeated pulling of the earrings as a habit.

Conclusion:

- The earlobe occupies a unique position among facial structures.
- The repair of the torn earlobe is not a difficult procedure, but it does require technical precision and appropriate planning of incisions and flap designs.
- The surgeon must choose the technique that the surgeon is most comfortable performing and the methodology that is most appropriate for a particular patient.

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INGROWN NAIL MANAGEMENT

- It is a condition where the nail grows into the surrounding periungual skin and soft tissue.
- It occurs when a part of the nail either the distal lateral corner or the whole of lateral nail plate grows into the skin and embeds into the surrounding soft tissue.

Synonyms

- Onychocryptosis
- Unguis incarnatus

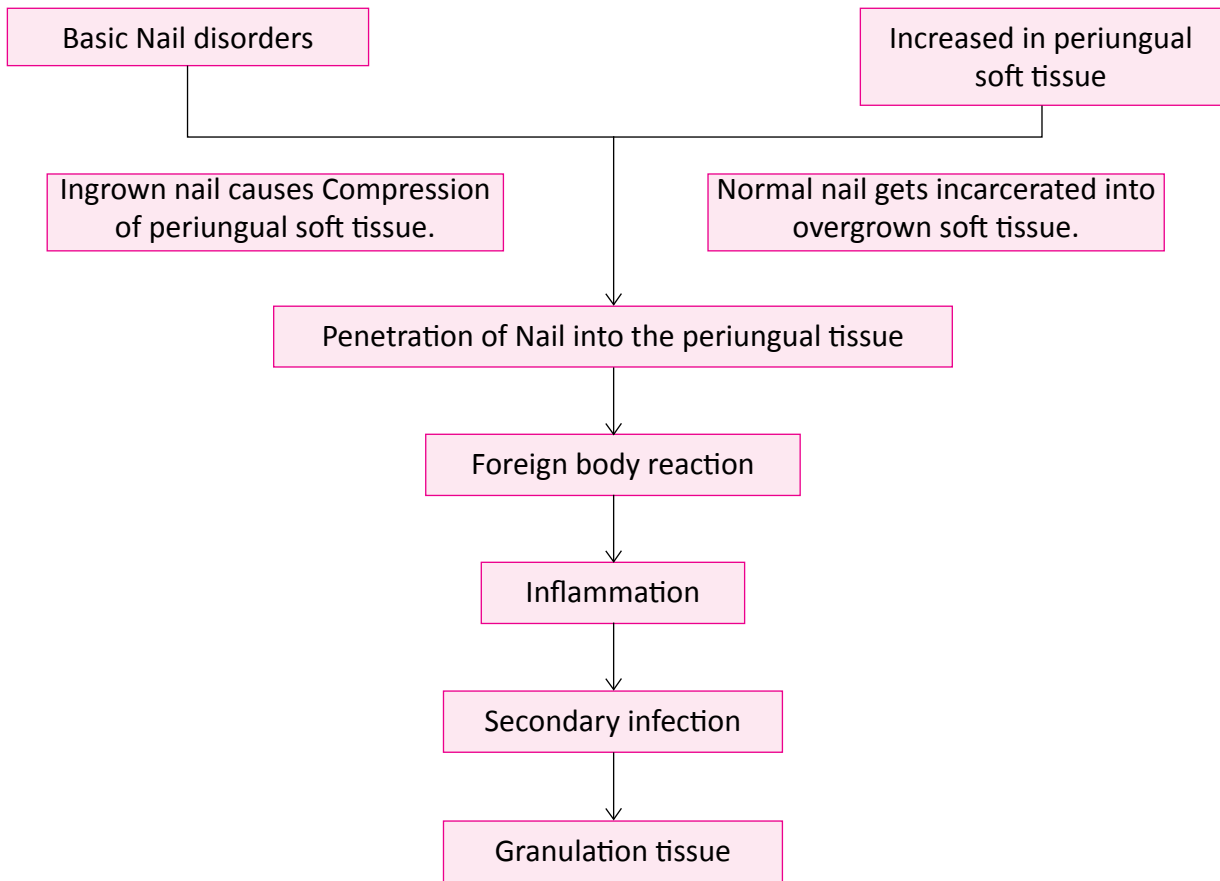
RISK FACTORS

Extrinsic	Intrinsic	
	Congenital	Acquired
Improper cutting of nail	Intrauterine trauma	Onychomycosis
Improper footwear	Hereditary/Familial	Paronychia
Increased sweating	Hypertrophic LNF	Nail tumours
Obesity	Over curvature of Nail plate	Age related nail changes
Trauma	Pincer Nail	
Systemic disorders like Diabetes mellitus		
Drugs		

TYPES

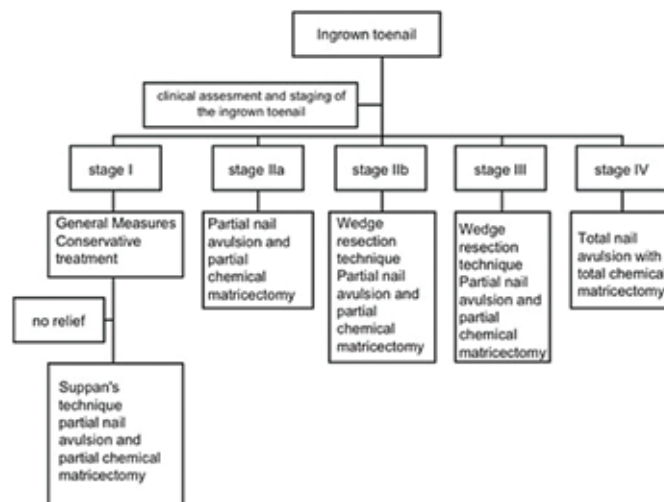
Neonatal	<ul style="list-style-type: none"> ● Free margin of nail is yet to over grow the toe tip
Infantile	<ul style="list-style-type: none"> ● Congenital malalignment of big toe nail ● Familial ● Over curvature of nail plate (NP) ● Hypertrophy of lateral nail fold (LNF) ● Distal lateral nail Embedding (DLNE)
Adolescent	<ul style="list-style-type: none"> ● DLNE
Adults	<ul style="list-style-type: none"> ● DLNE ● Pincer nail ● Reironychia
Elderly	<ul style="list-style-type: none"> ● Self-trauma ● Natural aging

ETIOPATHOGENESIS :



MANAGEMENT

- Based on Mozena classification system



GENERAL MEASURES

- Nail trimming
- Patient is instructed to cut the nail straight across and not round or in V shaped manner.
- Avoid cutting lateral margins in curved manner.
- The nail edge should extend past the tissue of the lateral nail fold.
- Footwear- “wide toe box” or “open toe” footwear to be used.
- Treatment of underlying pathology like Hyperhidrosis and onychomycosis is necessary.
- Warm water soaks and cleaning with hydrogen peroxide/iodine.
- Silver nitrate application for granulation tissue.

Silver nitrate application for granulation tissue.



Figure 1. Proper trimming of nails

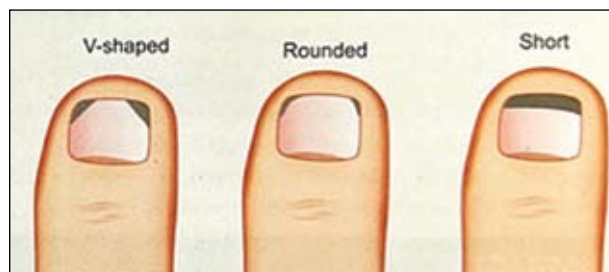


Figure 2. Improper cutting of nails

CONSERVATIVE TECHNIQUES

- | | |
|-------------------------------|------------------------------------|
| ● Tape or Band-Aid method | ● Packing or Cotton wick insertion |
| ● Gutter Splint technique | ● Dental floss |
| ● Nail brace | ● Nail wiring |
| ● Nail sculpture | ● VHO Brace |
| ● Resin splint | ● Toe spacer |
| ● Angle correction techniques | ● Orthonyxia |
| ● Newer techniques | ● Makizume Robot. |
| ● Tsume flat Rotator. | |

Gutter Splint technique

A small guard is inserted between Lateral nail fold and nail plate. A flexible plastic tube (such as IV drop infusion tube) is cut lengthwise with one end beveled to facilitate its entry. It is done with or without local Anesthesia.

Tube is cut 3 mm distal to the tip of nail to prevent outgrowth of granulation tissue. Tube is left in place for 2-4 weeks or longer till inflammation subsides.

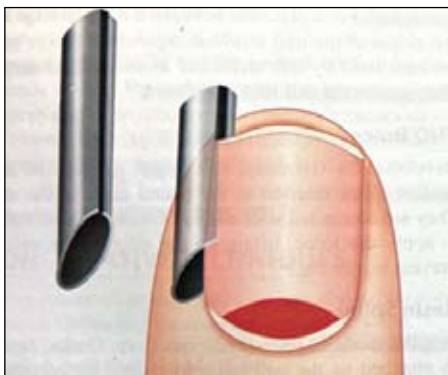
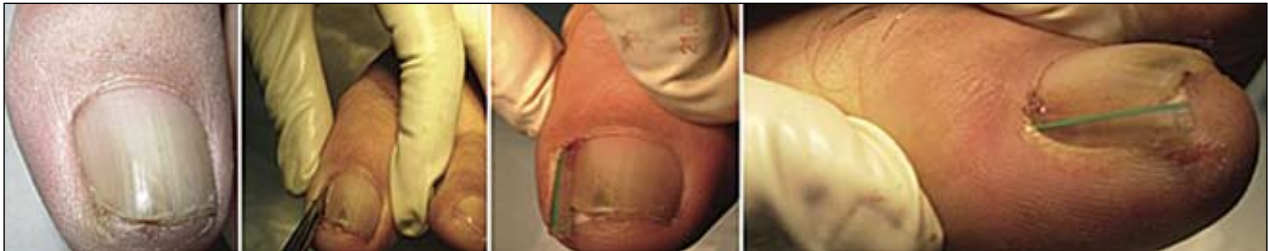


Figure 3. Gutter splint technique



Figure 4. Tape/Band-Aid method

Cotton wick insertion

Wisps of cotton are placed under the ingrown lateral edge of nail using a nail elevator or a small curette.

Band aid/ Tape method

Principle- To physically pull the side of the nail bed away from the nail and decrease the pressure, and also improve drainage of pus and help in drying of the wound.

One end of the tape is placed against the side of the ingrown toenail, along the granulation tissue, and the rest is twisted around the toe at an angle so that the other end overlaps the first but doesn't cover the wound itself.

Dental floss technique

A string of dental floss is inserted under the ingrown nail corner and is pushed proximally. The lateral nail plate and the spicule is covered and separated with it. This procedure can be repeated by the patient.

Nail brace

- Aim- to reduce the curvature of nail plate.

Types

- Adhesive braces
It is made up of thin strip of composite material glued to the dorsum of the nail plate. Strip naturally tried to return to flat state raising the edges of the nail in the process.

- **Hooked nail braces**
Hook is placed under either side of nail edge with a tensioning system to pull it upward. Wire is applied over the dorsum of nail plate and hooked under the lateral edge of the nail plate tightening by screwing decreases the curvature
- **Plastic bands**
They are glued over the nail. Due to memory effect, they gently uncurve the nail. Copper - Aluminium - Manganese based shape memory alloys can be used.



Figure 5. Hooked Nail brace

Nail wiring

Two holes are made at the distal free edge of the nail plate laterally using a 23 G needle. An elastic wire is inserted until angle of nail plate becomes less than 60 degrees. The wire is bent forward, cut with clippers. Adhesive agent like ethyl 2-cyanoacrylate is used to fix the wire. Elasticity of the wire helps in curing the deformity of the ingrown nail.



Figure 6. Nail wiring technique

Angle correction

Principle- To correct the convexity of nail by filing the whole nail surface and reducing its thickness by 50-75%. Procedure is repeated every 2 months by the patient, helps make the nail thin and soft.

Nail sculpture

Formable acrylic is placed in between the lateral edge and soft tissue of the nail to avoid ingrowing. The formed acrylic plate pushes the nail fold downward.

VHO Brace

It is made of two hooked wires inserted at the lateral edge of the nail. They are connected with a loop of wire to lift up the edge of the nail to prevent ingrowing.

Resin splint

It is a splint made of resin, it is attached to the nail plate to reduce its curvature. It gives natural appearance to nail as it is transparent.

Orthonyxia

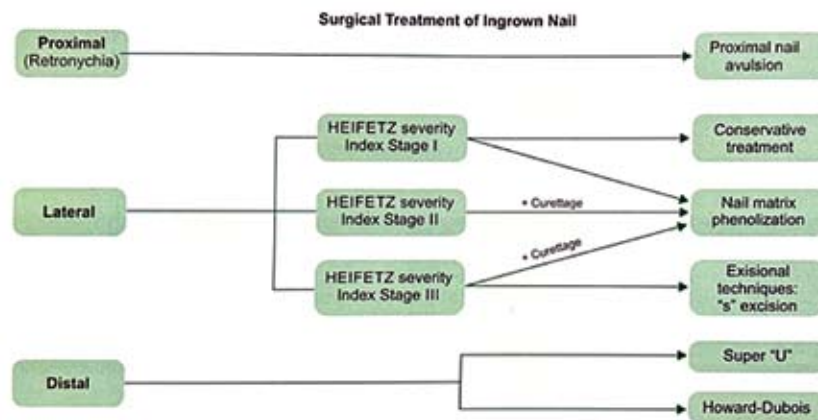
It is a small metal brace with an omega shape on its highest level and U-shaped hooks on both the sides to be placed around the edges. It is placed on nail, the tension is increased by the part placed on the dorsum of the nail, attached with gel. It helps relieve pressure on the soft tissues, simultaneously correcting the nail bed deformity.

Newer techniques:

- Makizume Robot®
- The nail is soaked in hot water for 20 minutes before and after applying the Makizume Robot® which is followed by drying with a hand drier.
- It mechanically corrects the curved nail.
- Tsume Flat Rotator®
- It is set on the edge of the nail and rolled up to correct the curved nail. It can be combined with other techniques.

SURGICAL MANAGEMENT

- Surgical approach based on clinical classification and Heifetz Severity Index



Lateral Nail Avulsion with chemical matricectomy.

- It is done under aseptic precaution and under digital nerve block anesthesia with tourniquet application.
- The lateral 20-25% of the ingrown nail is avulsed after separating nail plate from proximal nail fold and nail bed on the affected side of the toe.
- The nail matrix is destroyed by phenolization: applying 88% phenol solution directly to nail matrix three times for 1 minute each.

COMPLICATIONS:

- Oozing up to 3 weeks
- Postoperative periostitis
- Edema or burn in lateral/proximal nail fold
- Nail dystrophy.



Figure 7. Lateral nail avulsion with phenolization

Total nail avulsion by proximal approach

- It is indicated in Reironychia
- It is done under aseptic precaution and under digital nerve block anesthesia with tourniquet application.
- Nail plate is separated from proximal nail fold using nail elevator along its total width. Then the nail plate is separated from nail bed, distal attached are freed with scissors and the whole nail is avulsed with a hemostat.

COMPLICATIONS:

- Permanent postsurgical nail dystrophy
- Distal embedding caused by loss of counter pressure induced by the disappearance of nail plate.

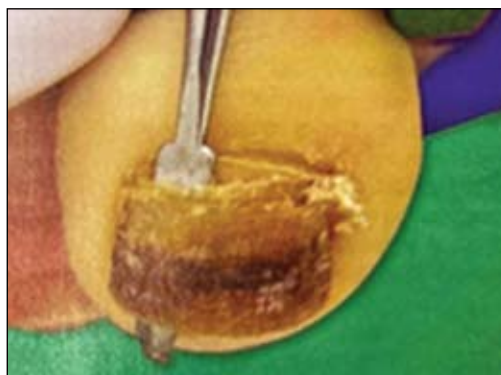


Figure 8. Proximal nail avulsion

Lazy S excision technique

- It is done under aseptic precaution and under digital nerve block anesthesia with tourniquet application.
- A lazy "S" shape is drawn with lateral excision lines reaching the toe's lateral aspect.
- Lateral nail fold, lateral nail plate and bed, lateral nail matrix (with lateral matrix horn) and lateral distal fold are removed down to bone. Wound is then sutured side-to-side.

COMPLICATIONS:

- Severe postoperative pain
- Spicules growth.

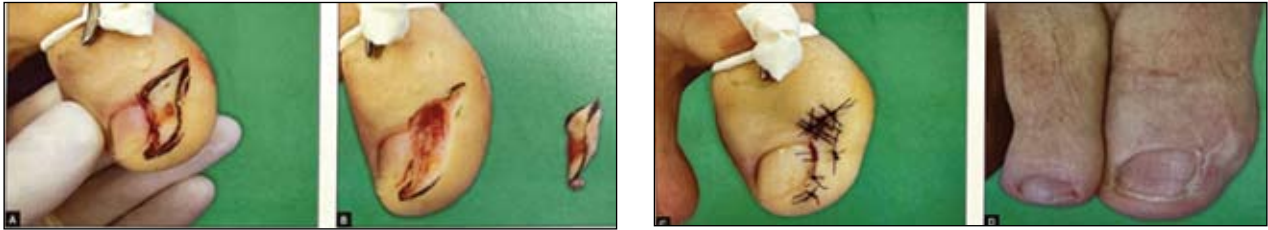


Figure 9. Lazy S excision technique

Howard-Dubois surgical technique

- **First incision:** A fish mouth incision is carried out 5mm below the distal groove and the lateral grooves, running from medial to lateral aspect of Distal Interphalangeal joint.
- **Second incision:** it is made reaching about 5mm width at the distal tip of phalanx.
- Soft tissue between both incisions are removed with a sharp pointed scissors down to bone and closed with simple sutures.

COMPLICATIONS:

- Necrosis
- Severe postoperative pain.



Figure 10. Howard-Dubois Technique

Super "U" technique

- Three incisions are taken
- **First:** Two straight incisions made along the proximal nail fold, begins at cuticle and ends at external limit of hypertrophic tissue.(Green line)
- **Second:** It runs parallel to lateral nail fold, distal nail fold and the other lateral nail fold, encompassing all the hypertrophic tissue. (Blue line)
- **Third:** Begins at the same place as the first incision and runs through lateral nail groove up to distal fold, 2-3mm distally from the hyponychium, turning to the other side ending at contralateral nail groove. Wound closed with running lock sutures.

COMPLICATIONS:

- Parrot beak nail by removing the onycholemmal band
- Severe postoperative pain.

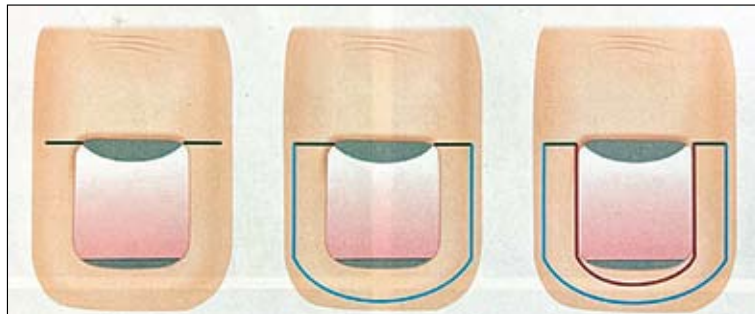


Figure 11. Super “U” technique

Wedge resection of toenail and nail fold

There are two techniques, they involve excision of affected portion of the nail plate, partial matricectomy and wedge extirpation of the hypertrophic nail fold and the nail bed.

- **Aesthetic reconstruction technique:**
 - Aim: To reduce the convexity of the nail fold with more attention given to the lateral nail fold.
 - It involves complete removal of nail plate and debridement of the granulation tissue, followed by removal of wedge shaped ellipse of skin and subcutaneous tissue lateral to affected nail fold.
- **Winogard’s technique:**
 - Wedge excision with more elaborate attention to the removal of the lateral matrix horn and better preservation of lateral nail fold.



Figure 12. Wedge resection

Soft tissue nail fold excision technique

- Pioneered by Vandebos and Bowers, based on the assumption that nail is not the causative factor for ingrown nail formation.
- It preserves the nail.
- Soft tissue enveloping the nail is excised widely in an elliptical manner, all the skin at the edge of the nail is removed.
- The wound is left open to heal by secondary intention.

COMPLICATIONS:

- Loss of cutaneous innervation.

Conclusion:

Correct management of Ingrown nail needs proper identification of the type and stage of the disease. The correct treatment option should be personalized to patient based on symptoms and clinical classification. Surgery should be considered when there is pain, in recurrent onychocryptosis, surgical relapse and failure of conservative treatment.

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MICRONEEDLING RADIOFREQUENCY

Radiofrequency is nonionizing electromagnetic energy that has been in medicine for nearly 100 years. Micro-needling radiofrequency (MNRF), incorporates micro-needling with fractional bipolar/monopolar radiofrequency, it combines concept of mechanical micro needling and delivery of radiofrequency in the dermis, causing fractional radiofrequency – thermal injury. This technique creates tiny columns of heat – induced damage known as radiofrequency thermal zones (RFTZ), surrounded by zones of spared tissue.

PRINCIPLE:

Cumulative experience in non – ablative collagen – stimulating devices has indicated that thickening of interstitial fibers in the dermis is possible with controlled thermal injury, without epidermal damage and the development of side effects.

EQUIPMENT:

Handpiece: Fractional RF devices are bipolar RF systems with either one (MFR) or two - MFR and superficial fractional radiofrequency (SFR) i.e., dual mode RF handpieces.

- a) MFR handpiece has disposable, attachable tips usually 25 or 49 microneedles in 1 cm² through which the RF energy is delivered in fractionated manner. The needles can be insulated (1st generation) or non- insulated (2nd generation), usually the needles are insulated. The microneedles are:
 - i. Diameter – 200 microns
 - ii. Length – 0.5 mm to 3.5 mm with only uninsulated and tapered active needle tip of 300 microns in length.

The needle penetrates skin and delivers

heat in dermis while the epidermis remains comparatively protected.

- b) The SFR handpiece tip has dual channel electrodes which sequentially deliver the RF energy for each channel. There are no needles involved.
 - i. **First channel:** Decreases the impedance of the skin by increasing the temperature of dermis.
 - ii. **Second channel:** Creates a mild coagulative zone through thermal effect over wide area, inducing epidermal micro peeling. The maximum energy output of most of the machines is 50 W delivered in graded level settings. The exposure time can be set from 10 to 100 ms.



MECHANISM OF ACTION

- I. There are three mechanisms of action of MNRF:
 - a) Thermal injury induced by RF energy at microneedle tips.
 - b) Mechanical injury caused by the movements of microneedles through the skin.
 - c) Platelets released during bleeding (induced by microneedles) provide various cytokines,

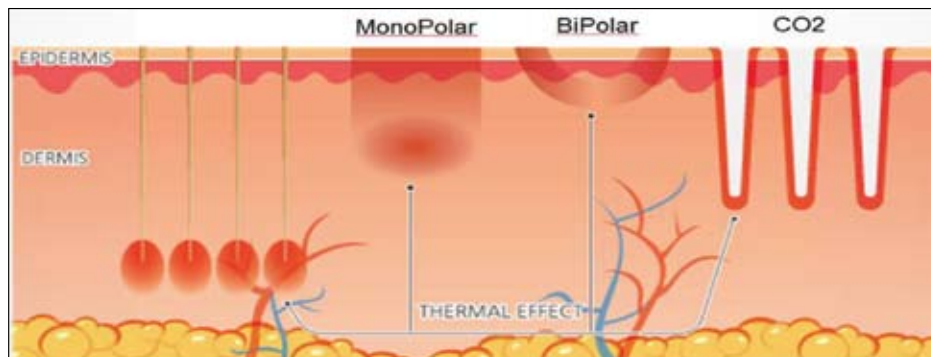
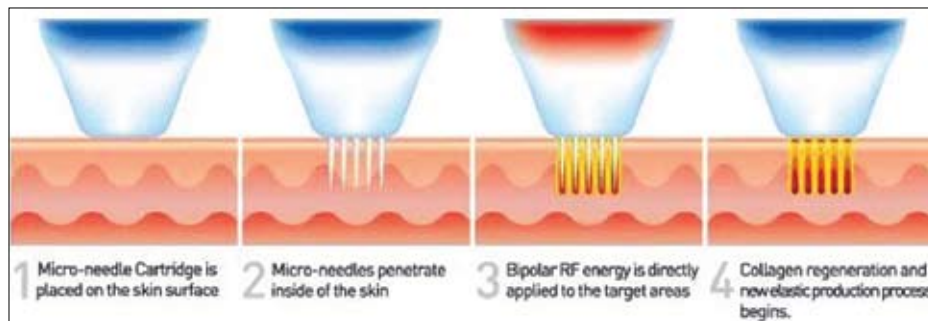
growth factors, etc. which help in wound healing.

- II. Tissue resistance (impedance-R) to the RF energy results in thermal energy (volumetric generation of heat). The RF energy activity is independent of any chromophores unlike lasers. According to Ohm's Law:
Energy (J) = Current (I)² X impedance (R) X Time (T)
- III. Multiple microneedles with adjustable lengths can penetrate and deposit heat thus inducing micro coagulated thermal zones (RFTZ) at each of the needle tip.
- IV. There is a three dimensional even heat distribution at different layers of dermis, subcutaneous fat, fibrous septa etc. which create variable levels of impedance and hence generate variable amount of heat. The impedance of dermis is lower (and hence, conductivity is higher) compared to epidermis due to higher water content, because of which the amount of RF energy

flow is greater in the dermal tissue leading to reasonable higher levels and subsequently formation of larger coagulative zones. This results in stimulation of inflammatory cascade followed by collagen contraction and stimulation and formation of new collagen, elastin and hyaluronic acid causing dermal remodeling. Subcutaneous fat also generates greater heat hence these effects are seen as sebo- suppressive and diminished sweating.

Dermal remodeling continues for next 3-6 months or even longer, which ultimately leads to secondary phase of gradual collagen contraction.

- V. Superficial fractional radiofrequency: Superficial dermis is volumetrically heated resulting in dermal coagulation and the epidermis causing micro peeling. Overall, together this brings out improvement in fine wrinkles, skin texture and tone.



INDICATION

- Acne Scars
- Wrinkle reduction
- Skin tightening
- Skin rejuvenation
- Open- pore reduction
- Non – surgical facelift
- Traumatic / surgical scars
- Hyperhidrosis
- Striae distensae
- Spider veins/ Telangiectasias

CONTRAINDICATION

- Active infection
- Bleeding disorders
- Pregnancy
- Metal implants
- Skin malignancy
- Pacemaker in situ
- Keloidal tendency

PRE-TREATMENT

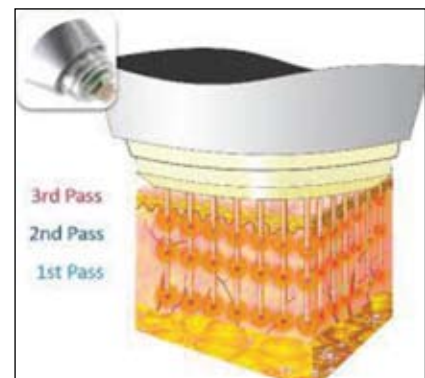
1. Regular sunscreen application
2. History of herpes – pretreatment prophylaxis of acyclovir/valacyclovir.
3. Counselling – steps of procedure, its outcome, side effects, complications and requirement of multiple sessions.

PROCEDURE

1. Topical anesthesia: A eutectic mixture of local anesthesia (Lignocaine 2.5% and Prilocaine 2.5 %) applied for 45 minutes to 1 hour prior to the procedure.
2. Before procedure area is cleaned with povidone- iodine.
3. Attach MFR microneedle cartridge to the head of the MFR hand piece.
4. Set parameter of the machine: Level of energy, pulse width, and needle depth as per indication and location.
5. Techniques – stamping method – Hold MFR cartridge perpendicular to the skin surface. Go linearly row wise from center to the periphery, stamping the MFR needle cartridge, and simultaneously firing the shots of RF energy with either hand or footswitch. The microneedles get automatically withdrawn leaving behind multiple bleeding points. Leave a gap of 1-2 mm between each adjacent shots to avoid side effects due to overlapping.
6. Multilayered passes- Repeat passes (2-3) changing the level of energy, pulse width, and the needle depth lower than first pass (as you go nearer to the epidermis).
7. On forehead, bridge of nose, temples, infra orbital maxillary areas and the mandibular region keep needle depth 1.5-2 mm, whereas buttocks, back and cheek longer needle length of 3.5 mm can be used.

POST – TREATMENT CARE

1. Hemostasis is achieved with saline-soaked moist gauze pieces and ice pack can be used to soothe the skin.



2. Advised to use mild cleanser for facewash.
3. Topical thin layer of antibiotic cream and bland emollients.
4. Mild steroid creams may be required for persistent erythema.

SEQUELAE

1. Pain
2. Minimal serous oozing (exudation:1-2 days)
3. Erythema
4. Edema (lasts from 5- 10 days)
5. Crusting

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COMPLICATIONS

1. Bruising
2. Transient PIH
3. Transitory dryness of skin

SCHEDULE

Once in 4-8 weeks: four to six such sessions
MFR is a simple, safe, user friendly and office-based method of collagen induction at multiple levels in the dermis. Has minimal complications, downtime and excellent aesthetic results.



Dr. Ruta Joshi
Assistant Editor
Yuvaderma e-bulletin



Random things I noticed when I was forced to pay more attention to life around me

Your new teen brother may want nothing to do with you and will cringe in embarrassment when you talk to his friends “like the kids talk these days” or at least like how you think the kids talk these days. But he’ll always look out for your car after school and you can see him smile through the rear-view mirror when he sees it’s you who’s picking him up that day.

1. My mother loves to fairy light up the house even if it means we look like one of those loud absurd families that overdo Christmas when it’s not Christmas (newsflash: we are that loud absurd family) and though my dad has no particular interest in watching the little lights twinkle or their reflections on the polished surfaces of the house twinkle back, he still admires them with childlike wonder - every time.
2. That people who text you with an ‘all okay?’ when you’re off the grid are important.
3. So are people who first ask you if you’re in a place to listen to them whine before doing, even if you’d listen to them in a heartbeat and you both know it, people who notice the color of your nails over a pixelated video call, people who toast to your tiniest win, even if it’s keeping a plant alive.
4. Also important, are people who break down the most complex of pathogeneses and teach you in the simplest of ways while not making you feel stupid for asking them in the first place.
5. That a bookstore is where you should go to buy a recco and not Amazon.
6. Your new teen brother may want nothing to do with you and will cringe in embarrassment when you talk to his friends “like the kids talk these days” or at least like how you think the kids talk these days. But he’ll always look out for your car after school and you can see him smile through the rear-view mirror when he sees it’s you who’s picking him up that day.
7. My dog hates head rubs but she knows it’s how I show her love, so she nudges her head close to my hand when she sees me and (rather reluctantly) sits through it. (the high-pitched arandjyuuuu-the-kyuteeesht-doggggg in the world included)
8. Healthy friendships are important. And I cannot stress this enough. Friends who don’t buy your faux attempt at sounding fine, friends who give you undeterred advice, friends who call you out. Friends who celebrate you when you parallel park your car perfectly. Friends who cry with you over FaceTime, make you brownies and push you out of your comfort zone.
9. If you have the time to start your mornings with the newspaper and coffee sprawled on the floor with the morning light flooding in, then you should take it. It is luxury at its peak.
10. That music is mysterious and intoxicating

and the hold it has on every life form that's traversed the planet is ethereal, to say the least.

11. Watching a show over and over doesn't make you boring you're just holding on to stories and people that are familiar and therefore comforting.
12. That dogs and cats and every tiny birdie come with great detail and perfection, so much so that when they look into your eyes, you almost feel like you're a part of something bigger. (And this coming from someone who wouldn't go anywhere near your pet however adorable)
13. That every home has a particular way of making Maggi. Ours is a giant generous dollop of ghee, followed by a final stir before serving them in bowls with tiny motifs. The melting ghee and Maggi vapors swirling in circles over the pot is something I'm excited to pass on.
14. People are mostly nice. And sometimes they're blinded because they're just looking out for themselves.
15. That spinach grown in your backyard is always tastier
16. That drinking water and taking care of yourself actually works wonders, who knew



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The Green Sun In The Red Sky

My Sunday morning began with a migraine. Followed by cereal with cold milk. It also happened to be the same Sunday morning that I was asked to babysit Atharv, my four-year-old nephew. I drove to my sister's house, a little later than I was asked to. Okay, a lot later, but when I finally did, I was greeted with a toddler hug, high fives from a tiny palm, and a list of magnetic instructions on the fridge door. As I skimmed through the bullet points, a voice asked, "How do you make rain, Uncle K?"

Silence

A throbbing head, a tiny human, and a degree in pure sciences, yet I struggled for a simple answer.

"Evaporation of water molecules" I shrugged.

"Evapo..what?" The little one enquired.

"Um, let's leave it for later, right now we have some papaya to finish. We don't want the flies to get it before you do" I said trying to keep the midget (and myself) busy.

"Uncle K, but why do flies find gross things, yummy?"

I did not sign up for this.

"Why can't I call pink, light red?"

"Is magic real?"

Munching on the papaya, he shot questions my way like fiery comets.

Dodging them helplessly, I wiped the sweat off my temple.

He then grabbed a box of crayons and began to scribble the sun green, and the sky red and

drew a dozen clouds with black marker.

I wanted to fix his multicolored world, but Picasso shouldn't be interrupted.

My sister returned, with a car full of groceries. As I headed out to help her, I heard Atharv running to his mother with his artwork. She asked him if he had fun. I heard him say 'eva-poop-ation'. I couldn't help but laugh.

As I carried the last bag to the kitchen I heard the curious little voice, yet again, asking where the rains went that day.

"Well, little Atharv collected all the fluffy clouds from the sky, put them in his pocket, used his magic black marker, and cast them all on paper. How could it rain, if all the clouds were on Atharv's book?" She smiled.

A wide-eyed boy listened carefully and suddenly found all his answers right there.

It made sense to him somehow.

Atharv did the same.



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Regards,
Editorial Team