DERM-CONNECT

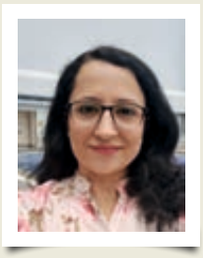
INDIAN ASSOCIATION OF DERMATOLOGISTS,
VENEREOLOGISTS AND LEPROLOGISTS
(DELHI STATE BRANCH)

NEWSLETTER : JANUARY - MARCH 2026 VOLUME 1 ISSUE 4

THEME:

UPDATES IN PEDIATRIC DERMATOLOGY

OUR TEAM



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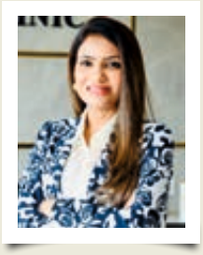

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Message from

Dr.Deepika Pandhi
President
IADVL-Delhi State Branch 2025-26

Dear Colleagues, it gives me great pleasure to pen this final message on behalf of the IADVL Executive council 2025-2026. After taking over this responsibility from 1st April, 2025, we complete our tenure on 31st March,2026. I would like to immensely thank each one of the members for joining us for all the academic, community and social events held during this tenure. I would also like to share that with your active support and participation in the academic, community and social events during our term, IADVL Delhi state branch has been awarded the best large branch award for 2025 during DERMACON 2026 at Bengaluru. Congratulations to all the IADVL DSB members.

Academics:

The annual IADVL DSB CUTICON was held as a two day event, that started with the preconference workshop that included 9 workshops being held in two parallel halls with enthusiastic participation in the small group cadaveric 3D filler and injectable workshop and the first ever body contouring workshop, workshops on boosters and threads in acne scars, face contouring, case based discussion on medical and surgical interventions in trichology and managing hyperpigmentation, lasers potpourri and session on the way forward on our anti-quackery efforts. The latter had representatives from the National and Delhi medical councils. Another unique initiative was there were no patients for the live demonstration and we had doctors and staff as volunteers for the workshop. More than 200 delegates attended the event

The IADVL DSB CUTICON on December 7th was attended by 350 delegates. The event included resident focused sessions including award paper and free paper session, two quiz sessions (the IADVL DSB quiz and the IADVL -Glaxo National quiz) and for the first time the Hot Debates in Dermatology – on-the-spot argumentation session moderated by Dr Sumit Gupta, with 3 rounds of extempore debates. The scientific deliberations had active participation with discussion on how do I manage CLE, recalcitrant pemphigus, onychomycosis and paediatric CADR; psoriasis therapy updates especially focused on biologics; Dr PN Behl Oration by Dr. Sujay Khandpur "An Odyssey into Home-based and targeted Phototherapy" and practice management sessions on laser-assisted drug delivery, digital dermatology fatigue, clinical pearls in pediatric dermatology and skin span, AI in dermatology practice, scar management– prevention & case discussion and a hot debate on Sunscreens in Tropical Countries. There was an expert session on CSU by Dr Pavel Kolkhir and panel discussions on vitiligo management, challenging cases in dermatosurgery. and managing complications. Further, the landmark 5 volume book series 'Compendium of Diagnostic Dermatology' with a focus exclusively on diagnostic aspects of dermatological diseases and the third IADVL DSB official Newsletter 'Derm-Connect, the third quarter edition (July to Nov) with a focus on hot topics in dermatosurgery were published and released. The IADVL DSB postgraduate thesis grant and the cumulative point based Relay quiz (of the 3 monthly quiz sessions during monthly meets) were awarded during the event.

The term ends with a focused event, the IADVL DSB Postgraduate clinic on 29th March 2026. It is planned with examination simulation sessions and video demonstration and we have enthusiastic postgraduate participation from Delhi and beyond.

Community activities

World Aids Day was marked by IADVL DSB, through a social media initiative on Instagram and Facebook that highlighted the role of a dermatologist in detection and management of people living with HIV (PLHIV) and a community education initiative with a theme of "Overcoming disruption, transforming the AIDS response." Operation Hope, Hair Outreach for Patient

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Empowerment, a joint initiative of IADVL DSB and FUE for patients with secondary cicatricial alopecia was launched during the Preconference workshop on 6th December. OPERATION HOPE, is a compassionate mission to provide charitable hair transplantation to individuals suffering from disfiguring secondary cicatricial alopecia. We invited dermatologists, hair surgeons, and centres across India to become part of this noble cause. A live interaction with 3 patients and media coverage was carried out during the launch. Additionally, anti-topical steroid selfie point and video campaign was carried out during the IADVL DSB CUTICON. Public awareness education material shared in all IADVL DSB handles/ WhatsApp groups. On the World Leprosy Day 2026 (January 25th), IADVL- Delhi State Branch team carried out a campaign to increase public awareness in line with the theme "Ending stigma, promoting dignity, early detection, inclusive healthcare and ensuring zero disabilities". Campaign in Hindi and English was carried out and a public lecture was conducted at UCMS, Delhi.

Social activities

IADVL DSB CUTICON dinner was held on 6th March with Talent fiesta- IADVL DSB Idol, Super dancer and laughter champion and an IADVL DSB picnic for all branch members and their families was held on 18th Januar. The kids enjoyed various activities like shooting, create your own pizza, painting, treasure hunt, entrepreneur challenge etc and there were exciting games for adults like musical chairs, tambola and emcee initiated impromptu contests and games with exciting prizes. With delicious food and sun-soaked ambience it was a day for IADVL DSB members to bond well! Finally, the IADVL DSB annual dinner was held on 14th March 2026. Please stay connected with IADVL DSB through our social media handles.

Anti- Quackery

Anti Quackery Selfie Point and anti-quackery video campaign and a focussed half hour panel discussion on anti- Quackery way ahead with panelists from NMC and DMC were held during CUTICON. For the first time a contest focused on quackery was held focused on postgraduates. The categories included posters and short videos with attractive prizes. The idea was to sensitise our younger colleagues how to prevent quackery. To safeguard our speciality let us actively spread the message that inly a qualified Dermatologist should be consulted for any skin, hair, nail and genital complaints and keep practicing Dermatology ethically.

We present here the first newsletter for 2026 focused on pediatric dermatology with a theme "Children are not little adults". Hope you enjoy it and find it useful. Happy Reading!!

I conclude with once again thanking you for your support throughout the year, together let's make dermatology grow from strength to greater heights.

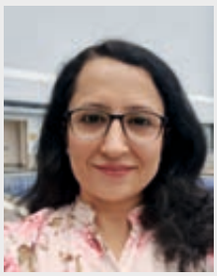
Warm Regards

Dr.Deepika Pandhi

President

IADVL-Delhi State Branch 2025-26

Editor message



Dr Shikha Gupta
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Greetings everyone!

It is an honor for me to be associated with Derm- Connect, the official newsletter of IADVL- Delhi State Branch- since its inception, for 3rd year in a row.To witness it flourishing with each issue, providing opportunities to its branch members to showcase their academic achievements and their other passions as well.The current issue focusses on Pediatric Dermatology- a topic close to my heart. We have tried to cover the practical management of pediatric cases seen day to day in our clinics. Also in this issue, we have attempted to showcase various achievements of our esteemed branch members at the recently held Dermacon 2026.As always, we will continue highlighting the branch activities being conducted by the superb team this year, led by Dr Deepika Pandhi and Dr Rahul Arora. One of the highlights of these past few months has been the cadaveric 3D filler & injectable workshop conducted during the pre-conference workshop, which was one of a kind and well received. The annual cuticon featured talks and discussions on practical hot topics. Another such event for the postgraduates, IADVL DSB Postgraduate Clinic is also something to look forward to.On the non-academic front, the picnic hosted by the DSB team was very well-received. It also included young entrepreneur's fair, where our budding entrepreneurs got a chance to showcase their talents. There have been a number of other community and social events as well during this quarter.I hope to continue to learn and enjoy from each contribution in this project.

With warm regards,

Dr Shikha Gupta
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TINY NAILS, BIG CLUES: DERMOSCOPY AS A DIAGNOSTIC TOOL IN CHILDREN

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Introduction

Nail disorders in the pediatric population represent an elusive area of clinical practice. Their features are frequently underrecognized, despite providing valuable insights into underlying systemic diseases. In children, an understanding of physiological variants that evolve with growth is essential to avoid misinterpretation as pathological findings. Clinical examination alone fails to capture the nuanced features of these changes. Onychoscopy bridges this gap as a child friendly, point of care tool, enhancing diagnostic accuracy and guiding management without the need for invasive procedures.

Understanding normal nail variants in the pediatric population

From birth through adolescence, the nail unit undergoes progressive maturation, making it physiologically and structurally different from adult nails The nail plate is thinner, softer, and contains a higher water content due to incomplete keratinization, rendering it more flexible and prone to splitting.1 Nail growth rates are faster and the width-to-length proportions of the nail plate differ. Increased translucency may cause the nail bed vasculature to appear exaggerated on onychoscopy, despite it being a physiological finding. Several commonly encountered findings, including punctate or transverse leukonychia, white striations, onychoschizia, neonatal and infantile koilonychia, mild onycholysis, and pseudohypertrophy of the great toenails, tend to resolve spontaneously with age.1,2 In contrast to adults, degenerative and trauma-related nail changes are rare, while the congenital and developmental nail disorders are encountered more frequently. Adult dermoscopic alarm criteria cannot be directly applied to children. These distinctions highlight the need for age-appropriate interpretation of onychoscopic findings.

Onychomycosis

Onychomycosis is uncommon in the pediatric population, with reported prevalence ranging from less than 0.5% to 4%, remaining significantly lower than in adults.3 Onychoscopy commonly reveals yellowish to brown chromonychia, longitudinal striae, subungual hyperkeratosis, and irregular or jagged proximal margins of onycholysis, described as “spikes” or a “ruin appearance”.4 Linear hemorrhages and diffuse opacity of the nail plate may also be observed.3 (Figure 1)Similar to adults, these dermoscopic features show high concordance with fungal invasion of the nail unit; however, pediatric cases frequently present with milder dystrophy and earlier visibility of dermoscopic signs.

Figure 1 : *Diffuse involvement of multiple nails with melanonychia and nail plate dystrophy*

Trachyonychia

Trachyonychia is predominantly a pediatric nail disorder, with peak onset between 3 and 12 years of age, and is recognised as a common cause of diffuse nail dystrophy in children. It is characterized by multiple fine longitudinal ridges, diffuse nail plate roughness with loss of luster, superficial scaling, irregular pitting, and occasional splinter hemorrhages. Longitudinal ridging is reported in over 90% of cases and diffuse scaling in nearly all affected nails, with proximal nail plate involvement being more prominent in children than adults. Compared with adults, pediatric trachyonychia is more often idiopathic, involves multiple or all twenty nails, shows milder dystrophy, and has a higher likelihood of spontaneous improvement.1 (Figure 2)

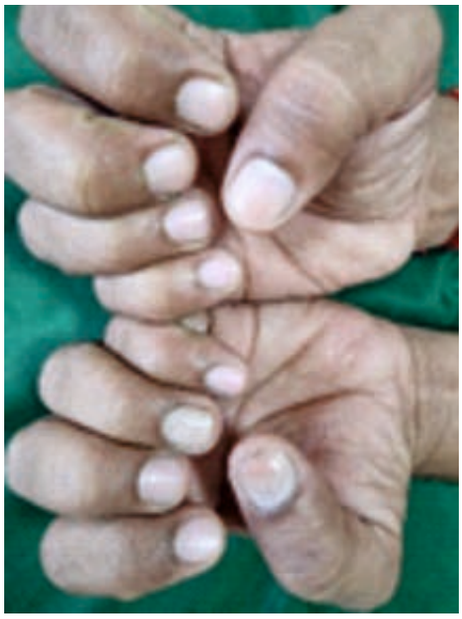

Figure 2 : *Shiny trachyonychia, with longitudinal ridging and mild scaling*

Longitudinal melanonychia

Longitudinal melanonychia (LM) in children on onychoscopy typically shows brown to black longitudinal bands with color heterogeneity, broad bandwidth, irregular borders, dots and globules, triangular configuration, and frequent pseudo-Hutchinson's sign, features that often appear alarming but are usually benign in pediatric patients.1,5 These features can be observed despite the absence of melanoma on histology. Novel dermoscopic patterns such as the "zigzag" pigmentation pattern have been described exclusively in children and are thought to be benign in nature.5 The prevalence of LM in children is low in population terms but it remains one of the most common nail pigmentary presentations in clinical practice, with nail apparatus melanoma being exceedingly rare in this age group.1,4 Key red flags to watch for include change in the band colour or width, purulent discharge, bleeding, ulceration and nail dystrophy without prior trauma. Clinical–onychoscopic surveillance is preferred over immediate biopsy in most pediatric cases. (figure 3)

Figure 3: *Longitudinal melanonychia in a 5-year-old .Pseudo Hutchinson sign present*

Genodermatoses

Specific onychoscopy findings are documented in very few inherited disorders: Darier disease shows longitudinal erythronychia and leukonychia with a V-shaped notch at the free margin, Hailey–Hailey disease exhibits longitudinal leukonychia; and tuberous sclerosis complex shows vascular nail signals such as subungual comets or tortuous vessels.6 Congenital nail matrix nevi demonstrate irregular longitudinal microlines, broad bands, "brush-like" distal fibrillar patterns, periungual pigmentation, and occasional Hutchinson's sign in children, features that mimic adult melanoma but are benign in pediatric cohorts. Onychoscopy in Nail-Patella Syndrome reveals triangular or V-shaped lunulae, longitudinal ridging, split or hypoplastic nails, and spoon-shaped nail plates, most prominently affecting thumbnails and index nails. The changes are often bilateral, symmetrical, and variable in severity, providing a valuable diagnostic clue for early recognition of the syndrome.1 In children with ectodermal dysplasia, nails often appear hypoplastic, brittle, or partially absent, affecting multiple digits.

Self induced nail disorders

Self induced nail disorders commonly habit tic deformity in children are caused by repetitive picking or rubbing of the proximal nail fold, leading to longitudinal and transverse nail plate ridging and cuticle loss. Onychoscopy shows transverse grooves, macrolunula, periungual scaling, longitudinal/branching grooves, and micro-hemorrhages, helping differentiate it from fungal or inflammatory nail disorders.7 These repetitive behaviors often coexist with other body-focused habits like nail biting and may be linked to stress or tic disorders. Early recognition and behavioral intervention are key to preventing permanent nail dystrophy.(Figure 4)

Figure 4: *Onychophagia of both finger and toe nails, shortened nail plate with periungual haemorrhage*

Conclusion

Onychoscopy is a quick, noninvasive window into pediatric nail health, revealing subtle clues often missed on routine examination. Recognizing patterns of ridging, pigmentation, and dystrophy can aid early diagnosis of both inherited and acquired nail disorders. With its growing utility, onychoscopy is set to become an essential tool in every pediatric dermatologist's practice.

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ANAESTHESIA IN PAEDIATRIC CASE

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Anaesthesia in Paediatric Cases: Tips, Tricks, and Best Practices

Unlike adult dermatology, where the patient-dermatologist interaction is typically predicated on a mutual understanding of necessity and outcome, the paediatric interaction is fundamentally different. The child often does not understand the necessity of the procedure, possesses limited emotional regulation to cope with the stress, and relies entirely on the parent and dermatologist for safety. Consequently, the administration of anaesthesia in this population is not merely a technical prerequisite for the surgery; it is the surgery's most critical component. Unmanaged pain or anxiety in a paediatric patient does not simply result in a difficult procedure; it can lead to immediate surgical failure, long-term psychological sequelae such as needle phobia, and a permanent erosion of trust in the healthcare.

Recent literature underscores a paradigm shift from "procedural restraint" to "procedural cooperation" and "atraumatic care". This shift demands that the academic dermatologist master a multimodal arsenal of techniques. We must move beyond the simplistic application of topical or injectable anaesthetics to a sophisticated integration of neuro-linguistic programming, advanced buffering chemistry, gate-control physiology, and age-specific surgical biomechanics.

Developmental Staging and Anaesthetic Strategy

The approach to a 6-month-old infant differs radically from that of a 6-year-old child. The academic dermatologist must assess the "developmental age" rather than just the chronological age to select the appropriate behavioural and anaesthetic interventions.

Infants (0–12 Months): The Sensory Phase

In this cohort, anxiety is purely sensory and separation-based. Their distress arises from physical restraint, cold temperatures, hunger, and separation from the caregiver.

- **Anaesthetic Goal:** Maximize physical comfort and minimize separation.
- **Technique - Swaddling and Positioning:** The traditional practice of restraining an infant supine on an exam table is increasingly viewed as traumatic and counter-productive. Evidence suggests that sitting upright, often on a parent's lap, significantly reduces distress scores. Swaddling or "bundling" the infant provides proprioceptive security, preventing the startle reflex and flailing that often necessitates forceful restraint.
- **Non-Pharmacological Analgesia:** The administration of sucrose solutions or breastfeeding during the procedure acts as a potent analgesic, mediated by the release of endogenous opioids. "Kangaroo care" (skin-to-skin contact) has also been shown to stabilize heart rate and reduce crying time during painful interventions.

Toddlers and Preschoolers (1–5 Years): The Magical Thinking Phase

These children have developed a sense of autonomy ("I do it!") but lack emotional regulation. They engage in "magical thinking," where they may perceive a medical procedure as a punishment for bad behaviour.

- **Anaesthetic Goal:** Distraction and the maintenance of a "safe" narrative.
- **Communication Strategy:** Honesty is paramount, but it must be developmentally framed. Research emphasizes: *Do not lie.* Telling a child “This won't hurt" when it will, creates a fracture in trust that is irreparable. Instead, use sensory, non-threatening metaphors. A needle prick is a "mosquito bite" or a "pinch"; the numbing sensation is the skin "going to sleep" or feeling "thick like a winter glove".
- **Restraint vs. Hug:** Mechanical restraints should be the last resort. The "therapeutic hug" or "bear hug," where a parent holds the child securely on their lap, provides necessary immobilization while maintaining the emotional connection and reducing cortisol levels.

School-Age Children (6–12 Years): The Concrete Operational Phase

These patients value mastery, control, and understanding the "why." They can comprehend the steps of a procedure and can engage in complex coping strategies.

- **Anaesthetic Goal:** Negotiation and empowerment.
- **The Illusion of Choice:** Offering choices where they exist empowers the child and reduces helplessness. Questions like "Do you want to sit on the chair or the bed?" or "Which arm should we look at first?" or "Do you want to watch the cartoon on iPad or listen to music?" give the child power to decide.
- **Explanation:** Explain the procedure in distinct, neutral steps. Avoid "trigger words" that carry violent connotations. Instead of "cut," use "open" or "fix." Instead of "burn," use "warm." Instead of "needle," use "sprinkler" (for buffered anaesthesia).

The Physiology of Distraction: Gate Control Theory

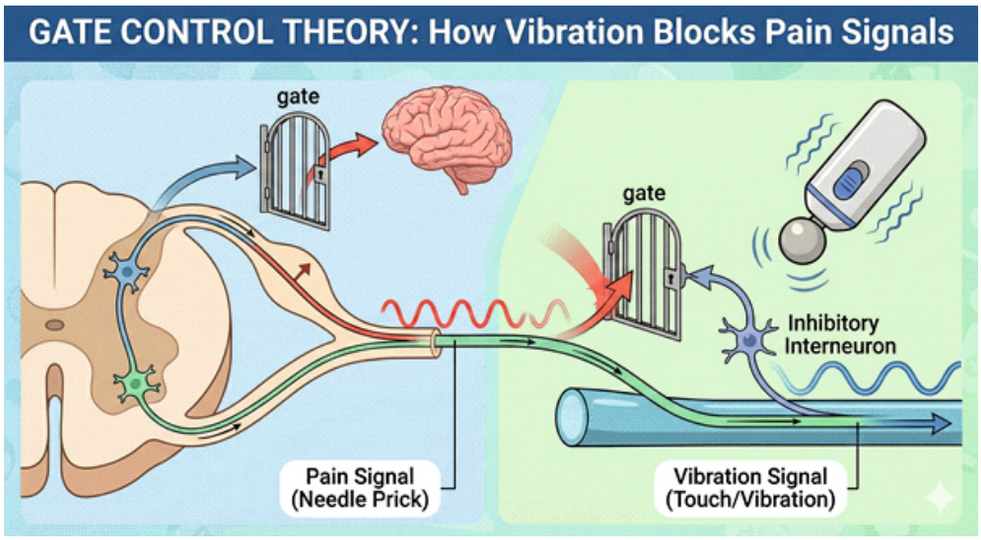
Distraction is not merely a psychological diversion; it is a physiological intervention rooted in the **Gate Control Theory** of pain (Melzack and Wall). This theory posits that the spinal cord contains a neurological "gate" that controls pain signals to the brain. Non-painful input (such as vibration, cold, or touch) transmitted via large-diameter A-beta fibers closes the gate to painful input transmitted via small-diameter A-delta and C fibers.

Vibration Anaesthesia

The vibratory device is a practical application of this theory, combining high-frequency vibration which can be combined with ice packs.

- **Mechanism:** The device is placed proximal to the site of the needle prick. The vibration stimulates the A-beta fibers, which inhibit the transmission of nociceptive signals from the injection site.

Clinical Evidence: Multiple randomized controlled trials (RCTs) have demonstrated its efficacy. In a study of 234 children, the intervention group showed significantly lower pain scores (2.5 vs 4.7 on the Wong-Baker scale) compared to controls. Other studies confirm reduced anxiety and improved cannulation success rates.



Cognitive Distraction

For older children, cognitive distraction engages the prefrontal cortex, creating a "cognitive load" that competes with the processing of pain signals in the thalamus and somatosensory cortex.

- **Techniques:** Active distraction (playing a video game, blowing bubbles, counting) is superior to passive distraction (watching TV). The act of blowing bubbles, for instance, also serves as a deep breathing exercise, which reduces autonomic arousal and muscle tension.
- **Virtual Reality (VR):** Emerging evidence suggests that immersive VR can act as a powerful non-pharmacological analgesic, effectively transporting the child out of the clinical environment entirely.

Hypnotic Language and the "Magic Glove"

Clinical hypnosis in paediatric dermatology does not require a formal trance induction or a darkened room. It utilizes "waking hypnotic suggestion"- the strategic use of language and imagination to alter sensory perception.

The Magic Glove Technique

For needle phobia or anxiety regarding local anaesthesia on the extremities, the "Magic Glove" technique is a gold-standard hypnotic intervention for children aged 3 to 12. It utilizes the child's imagination to induce a somatic delusion where the hand becomes numb/anesthetized.

Clinical Protocol:

1. **Induction:** The physician asks the child to choose a colour for their "magic glove" (engaging imagination and choice).
2. **Application:** The physician dramatically "puts on" the imaginary glove, stroking the child's hand firmly from the fingertips up to the wrist.
3. **Suggestion:** "As I smooth this glove on, your hand is becoming protected. It feels thick, like a heavy winter glove. The skin underneath is going to sleep. You might feel me touching the glove, but the skin inside is safe and quiet."
4. **Reinforcement:** "Can you feel how heavy and thick it is? Nothing can bother the skin inside the magic glove."
5. **Testing:** Lightly pinch or touch the area, asking, "Can you feel the glove protecting you?" Most children will confirm the altered sensation.
6. **Removal:** Crucially, the glove must be "taken off" after the procedure to return sensation, closing the ritual and validating the child's experience.

Mechanism: This technique relies on *sensory transformation*. By focusing attention on the "glove" (a tactile hallucination), the brain filters out nociceptive signals (pain) and reinterprets them as "pressure" or "touch". It shifts the locus of control from the external threat (dermatologist) to the internal resource (the child's mind).

Reframing and Positive Suggestion: Language can also act as a "nocebo" (negative placebo). Phrases like "this will hurt a little" or "stinging coming now" prime the child's amygdala for a threat response, lowering the pain threshold. Instead, the academic dermatologist should use positive, coping-oriented language. Instead of "Don't worry, it's almost over," use "You are doing such a great job staying still."

Topical Anaesthesia – The First Line of Defence

Topical anaesthetics are the standard of care for venipuncture, curettage, laser procedures, and as a precursor to infiltration. However, the efficacy of these agents relies heavily on the correct selection of the agent, appropriate application time, and managing the physiological trade-offs between vasoconstriction and vasodilation.

Eutectic Mixture of Local Anaesthetics (EMLA)

- **Composition:** 2.5% Lidocaine and 2.5% Prilocaine.
- **Onset and Duration:** Requires 60 minutes of contact time for reliable dermal analgesia. Duration of action is approximately 2 hours.

LMX-4 (Liposomal Lidocaine)

- **Composition:** 4% Lidocaine.
- **Mechanism:** LMX uses a liposomal delivery system. The lidocaine is encapsulated in lipid vesicles (liposomes) that facilitate rapid penetration into the dermis and protect the drug from metabolic degradation.
- **Onset:** Faster than EMLA; effective in 30 minutes.
- **Safety Profile:** Lacks prilocaine, making it safer regarding methemoglobinemia risk.

BLT (Benzocaine, Lidocaine, Tetracaine)

- **Composition:** Typically, 20% Benzocaine, 6-10% Lidocaine, 4% Tetracaine.
- **Status:** This is a compounded product, not FDA-approved.
- **Efficacy:** Very potent and fast-acting due to the high concentration and combination of ester (benzocaine, tetracaine) and amide (lidocaine) anaesthetics.
- **Safety Alert:** The high concentration of drugs, particularly benzocaine, poses a significant risk of systemic toxicity and methemoglobinemia. Its use in children is controversial and generally discouraged in favour of standardized FDA-approved products like EMLA or LMX.

LET (Lidocaine, Epinephrine, Tetracaine)

- **Formulation:** Available as liquid or gel.
- **Indication:** Specifically for **open wounds** (lacerations). It is not effective on intact skin.
- **Mechanism:** The solution is dripped into the wound. The epinephrine provides haemostasis (crucial for facial lacerations), while lidocaine and tetracaine provide anaesthesia.

The Art of Local Infiltration

When topical anaesthesia is insufficient (e.g., excision, deep biopsy), local infiltration is required. The injection itself is often the most painful part of the procedure. Mastering the "sting-free" injection is a hallmark of the expert paediatric dermatologist.

The Chemistry of Pain: Buffering

Commercial lidocaine with epinephrine is manufactured at a pH of roughly 3.5 to 4.5. This acidity is necessary to prevent the epinephrine from oxidizing (turning brown) and degrading. However, this acidity causes pain upon injection. Adding **Sodium Bicarbonate (8.4%)** to the lidocaine solution neutralizes the pH (bringing it closer to physiologic 7.4). **Standard Rule: 1 part** Sodium Bicarbonate (8.4%) to **9 parts** Lidocaine with Epinephrine (1:9 ratio). For example, add 1 mL of bicarb to 9 mL of lidocaine.

Physical Modification and Injection Mechanics

Beyond chemistry, the physics of the injection plays a crucial role in pain perception.

- **Warming:** Warming the anesthetic vial to body temperature (37°C) significantly reduces pain scores.
- **Needle Gauge:** Use the smallest feasible gauge. A 30 or 32-gauge needle is standard for the initial wheal.
- **The 90-Degree Trick:** While it is intuitive to slide the needle in at a tangential angle, a perpendicular insertion (90 degrees) penetrates the pain-sensitive epidermis faster and with less tracking trauma than a tangential approach.
- **Slow Administration:** Injecting *slowly* allows the fluid to diffuse gently. The rate of injection correlates directly with pain scores.

Maximum Safe Doses (Infiltration)

For paediatric patients, strict adherence to weight-based dosing is non-negotiable to prevent Local Anaesthetic Systemic Toxicity (LAST). Children have lower concentrations of alpha-1-acid glycoprotein (which binds lidocaine), potentially leading to higher free drug levels.

Inhalational Sedation – Nitrous Oxide

When local measures fail, or anxiety is insurmountable but general anaesthesia is too risky or aggressive, minimal sedation with Nitrous Oxide is the next step on the ladder.

Complications and Safety Protocols

Anaesthesia is safe only when the rescue plan is in place. The dermatologist must be prepared for the worst-case scenario: **Local Anaesthetic Systemic Toxicity (LAST)**. Though rare in dermatology, high-volume tumescent anaesthesia or accidental intravascular injection can cause LAST.

- **Pathophysiology:** Lidocaine blocks cardiac sodium channels, leading to arrhythmia and cardiovascular collapse. It also causes CNS excitation (seizures) followed by depression.
- **Symptoms:** Perioral numbness, metallic taste, tinnitus, seizures, cardiac arrest.
- **Prevention:**
    - **Aspirate** before every injection to ensure no vascular entry.
    - **Calculate** maximum dose (mg/kg) explicitly for every patient.
- **Treatment: Lipid Emulsion Therapy (Intralipid 20%)**.
    - **Mechanism:** The "Lipid Sink" theory posits that the lipid emulsion creates a separate compartment in the blood that absorbs the lipophilic anaesthetic molecules, pulling them away from the heart and brain. It also provides metabolic support to the cardiac myocytes.
    - **Protocol:** Bolus 1.5 mL/kg over 1 minute, followed by an infusion. Every OT performing infiltration must have a LAST rescue kit.

The General Anaesthesia (GA) Referral

Knowing when *not* to operate is a key skill.

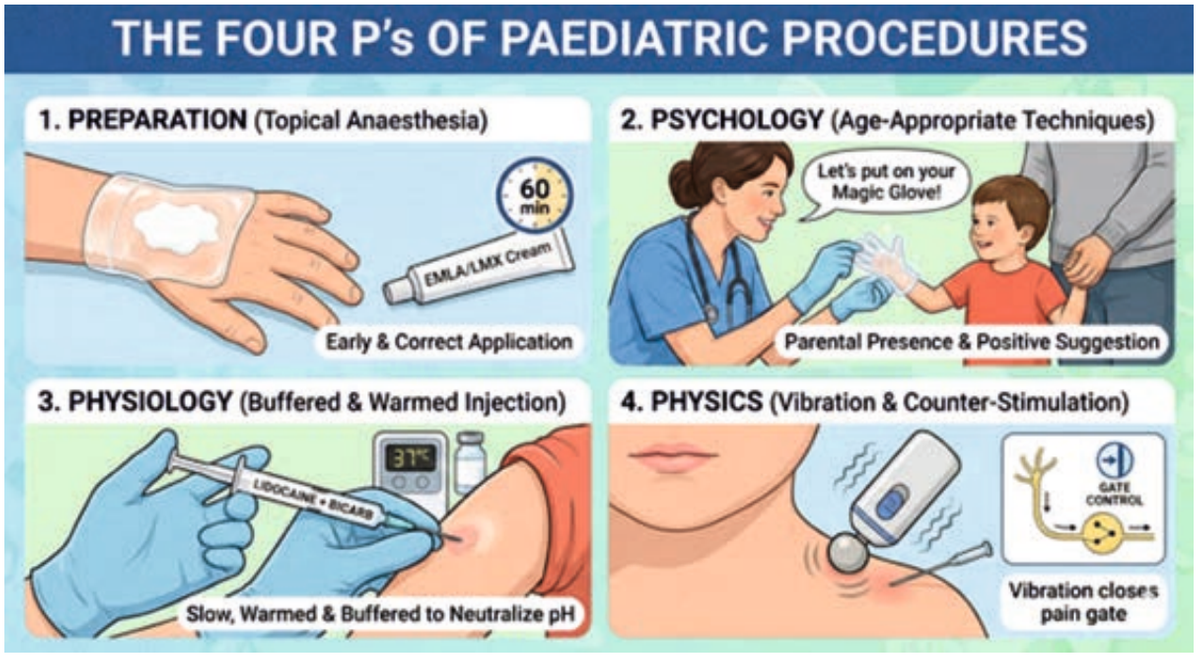
- **Indications for Referral:**
    - Procedures requiring > 30-45 minutes of absolute immobility.
    - Large surface area (toxicity risk with local).
    - Extreme needle phobia unresponsive to nitrous/hypnosis.
    - Complex anatomical locations (eyelid margins, inner ear).

Conclusion

The "perfect" paediatric procedure is defined by the **Four P's**:

1. **Preparation:** EMLA/LMX applied early and correctly (occlusion).
2. **Psychology:** Age-appropriate explanation, "Magic Glove," and parental presence.
3. **Physiology:** Buffered, warmed lidocaine injected slowly.
4. **Physics:** Vibration and counter-stimulation.

We do not just treat the skin; we protect the developing psyche of the child, ensuring that the cure is never more painful than the disease.



MOISTURIZER USE IN CHILDREN: SCIENTIFIC APPROACH

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Paediatric skin structure and barrier function

The skin of infants and children differs structurally and functionally from that of adults. Paediatric skin is thinner, has reduced corneocyte cohesion, lower concentrations of natural moisturizing factor (NMF) and an immature lipid matrix, leading to increased transepidermal water loss (TEWL). Although full-term neonates rapidly adapt after birth, barrier maturation continues throughout early childhood. Preterm infants demonstrate significantly higher TEWL and increased susceptibility to irritants and percutaneous absorption of topical agents.

Role of moisturizers in paediatric skin care

In children, moisturizers are considered therapeutic agents rather than cosmetic products, especially in conditions associated with barrier dysfunction such as atopic dermatitis, ichthyosis, and irritant contact dermatitis. Moisturizers play a central role in restoring and maintaining the epidermal barrier, reducing TEWL, improving stratum corneum hydration, enhancing skin resilience against environmental insults, reducing inflammation and decreasing the need for topical corticosteroids in inflammatory dermatoses. The risk factors prompting the institution of moisturizers at neonatal age include epidermal barrier immaturity due to conditions like extensive epidermolysis bullosa, septicaemia, use of antiseptics or vehicles in topical medications and phototherapy/ incubator use. Neonatal skin condition score (NSCS)[1] can be used for evaluation of the newborn skin (Figure 1).

Classification of moisturizers and mechanism of action

Moisturizers are broadly classified into occlusives, humectants, and emollients based on their primary mechanism of action.[2]

- **Occlusives** such as petrolatum, mineral oil, lanolin and dimethicone, form a hydrophobic barrier over the skin surface, reducing TEWL. Petrolatum is considered the gold standard occlusive and is widely recommended for use in neonates and infants due to its efficacy and minimal allergenic potential. Olive oil and mustard oil can be harmful for the neonatal skin, as they disintegrate the corneocytes. Sunflower oil/ safflower oil (high linoleic acid) may help improve the barrier function of skin. Virgin coconut oil (processed within 24 hours of harvest) should be preferred.
- **Humectants**, including glycerine, urea, propylene glycol, hyaluronic acid and alpha-hydroxy acids, attract and retain water in the stratum corneum. Glycerine is the most commonly used humectant in paediatric formulations owing to its excellent safety profile. However, higher concentrations of urea and alpha-hydroxy acids may cause irritation and are generally avoided in infants.
- **Emollients**, such as, isopropyl palmitate, isopropyl myristate, isostearyl alcohol, octyl octanoate are commonly used in topical formulations of moisturizers and pharmaceuticals. Physiologic lipid-based moisturizers containing fatty acids and ceramides mimic the natural lipid composition of the skin barrier that fill intercellular spaces between corneocytes, aid in eicosanoid production, membrane fluidity, and cell signalling thus, improving skin repair, and permeability.

Choice of moisturizers

- Dry, inflamed skin: FDA-regulated skin-protectant drugs with colloidal oatmeal, emollients containing ceramides and fatty acids.
- Dry, non-inflamed skin: Occlusives (example, dimethicone, mineral oil, and petrolatum)
- Normal to dry skin: Humectants

Directions of use

- Apply moisturizers immediately after bathing ('soak and seal' method).
- Use liberally and frequently (two to three times a day).

Indications

1. Atopic dermatitis

Atopic dermatitis (AD) is a chronic inflammatory dermatosis characterized by epidermal barrier dysfunction due to filaggrin mutation. Early initiation of emollient therapy in high-risk infants has also been shown to delay or reduce the incidence of AD.

- Humectants should be paired with an occlusive agent, such as petrolatum/ paraffin (10-25%) in combination with glycerol (5-20%), to protect against further drying of the skin, which otherwise could exacerbate AD symptoms.
- Topical ceramide-dominant, triple lipid products containing ceramides, cholesterol, and fatty acids (in the ratio of 3:1:1) amplify lipid production and delivery to the stratum corneum intercellular spaces, replenishing the lamellar bilayers that are critical for normal barrier function and antimicrobial defence, when compared to conventional emollients.
- Plant-derived ingredients such as Licochalcone A, glycyrrhizin exhibit anti-inflammatory properties. Studies have demonstrated that a 0.025% Licochalcone A-containing moisturizer significantly improved clinical characteristics and itch intensity in AD.
- Colloidal oatmeal is thought to induce the repair of barrier damage, regulate lipid complex in stratum corneum, and enhance pH-buffering capacity, which aids in protection against irritants and normalizing cutaneous pH to its acidic range.
- 20% glycerol based emollient is effective to maintain epidermal hydration.
- Urea (7-10%) in combination with other ingredients such as polidicanol, glycyrrhetinic acid and profilaggrin complex act as NMF for the skin.[3]

2. Diaper dermatitis

The prolonged contact with urine or faeces along with diaper occlusion leads to increase in hydration and skin pH leading to bacterial or fungal contamination. Thus, barrier emollients containing zinc oxide, petrolatum, cod liver oil, dimethicone, lanolin, dexpanthenol, taurine and Burow solution (mixture of aluminium acetate in water) are useful.[4]

- Zinc oxide (5%) based ointments - act as physical barrier to water absorption and have anti-bacterial properties.
- Dexpanthenol – humectant, reduces TEWL.
- Taurine- stimulates synthesis of barrier lipids, anti-inflammatory properties.
- Petrolatum, lanolin, dimethicone- occlusives with barrier repair properties.

3. Ichthyosis

In disorders of keratinization such as ichthyosis vulgaris, moisturizers form the mainstay of therapy. Occlusive-emollient combinations with low-strength keratolytics are used in older children to improve scaling and skin texture.

- Urea based moisturizer (7.5-10%) is effective for larger surface.
- A 5% *N*-acetylcysteine and 5% urea cream compounded in a moisturising skin cream may be helpful.[5]
- A combination therapy approach with a physiological lipid-based barrier repair topical emulsion and ammonium lactate 12% lotion has been found effective.

4. Xerosis and pruritus

Xerosis is common in children, particularly in colder climates and with frequent bathing. Regular application of moisturizers effectively restores hydration and prevents progression to eczematous conditions.[6]

- Cream containing 5% urea and 3% polidocanol is found effective in patients with AD, dry eczema and pruritus without irritant potential.[7]
- Appropriately formulated baby oils containing sunflower, coconut and almond oil can be lightly applied to the neonate skin after bath for transitory dryness only.

5. Psoriasis

Emollients play an adjunctive role by normalizing hyperproliferation, differentiation, and apoptosis with anti-inflammatory effects.

- White soft paraffin based occlusive moisturizers are preferred in lotion base for widespread use and ointment/ cream formulations for thick skin over palms and soles.
- Pre-treatment with clear mineral oil enhances the therapeutic efficacy of narrow-band ultraviolet B phototherapy.

Safety considerations

Children are at higher risk of systemic absorption of topical agents due to a higher surface area-to-body weight ratio. Therefore, moisturizers used in children should be free from fragrances, dyes, essential oils, and unnecessary botanicals, which are common causes of contact sensitization. Preservatives such as parabens and phenoxyethanol are considered safe at approved concentrations, while topical products containing salicylic acid, high-strength urea, or propylene glycol should be used with caution in infants.

Parental education and adherence

Parental education is critical to successful moisturizer therapy in children. Studies show that consistent application technique and adequate quantity are more important than the specific formulation used. Counselling of caregivers regarding the chronic nature of barrier dysfunction and the need for long-term emollient use significantly improves adherence and clinical outcomes.

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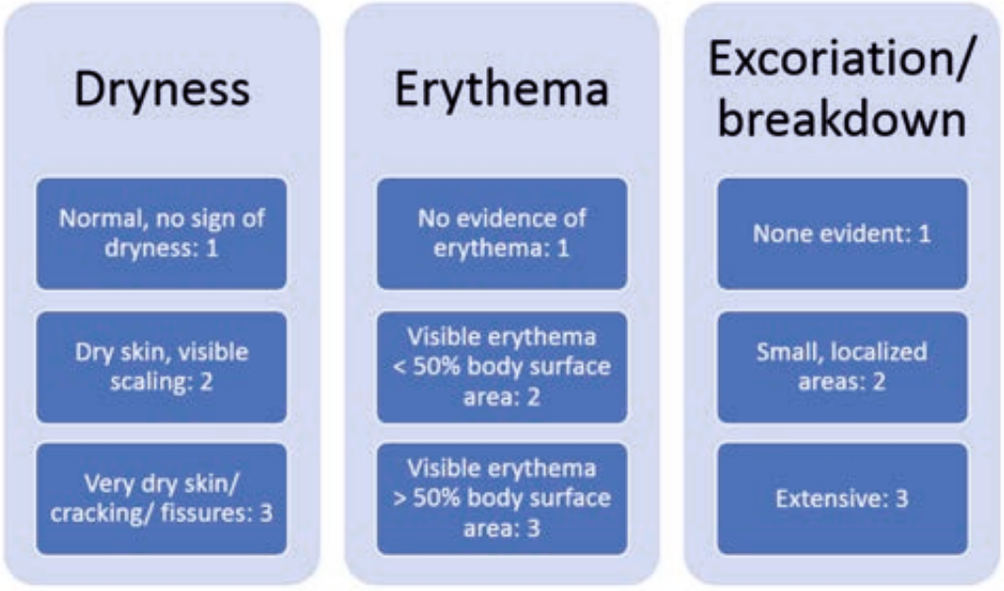

Figure 1: *Neonatal Skin condition score (NSCS) [Perfect NSCS: 3, Worst NSCS: 9]*

HPV VACCINATION IN CHILDREN: PRACTICAL CONSIDERATIONS

"RECOMMEND HPV VACCINES SAME AS OTHER ADOLESCENT VACCINE"

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Introduction

Human papillomavirus (HPV) is one of the most commonly encountered viral infections worldwide. It is primarily transmitted through skin-to-skin contact, including sexual contact, and most people get exposed to this virus at some point of lives. While most of the infections are asymptomatic and resolve on its own, some lead to formation of disease.

The non-enveloped, double-stranded DNA viruses can infect the stratified epithelium of the skin or mucosa. Currently, more than 200 types of HPVs have been identified and are divided into the alpha, beta, gamma, mu, and nu families but only 40 genotypes are infective. Based on their oncogenic potential, these have been classified as "High risk types" and "Low risk types". The high-risk types include HPV 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66, and 68 and are responsible for almost all cases of invasive cervical carcinoma, vulvovaginal, penile, anal and oropharyngeal squamous cell carcinoma with types 16 and 18 accounting for the majority.[1] HPV types 6 and 11 are known to be responsible for 90% of genital warts. It is estimated that 1,23,907 women are diagnosed with cervical cancer annually (HPV associated) and 77,348 die from the disease in India.[2]

Vaccination against HPV during childhood (male and female) is a highly effective public health measure that helps protect individuals from these preventable diseases and reduces pre cancers as well as cancer burden. At this age, the immune system responds more strongly to the vaccine, producing higher levels of protective antibodies compared to vaccination at older ages. In addition, vaccinating children before they are exposed to HPV ensures maximum protection, as the vaccine is preventive rather than therapeutic.

High vaccination (**catch up vaccination**) coverage in children lead to herd immunity, reducing the overall circulation of the virus in the population. This not only protects vaccinated individuals but also unvaccinated or have weaker immune responses. Including male children in the vaccination programme suppress HPV transmission and reduce the overall burden of cervical disease in females.[3]

Childhood Vaccine Recommendations

HPV vaccines are L1 protein – VLP-based produced by recombinant DNA and cell culture technology and have a good safety profile and good immunogenicity against specific HPV types.

Available Vaccines in India

- **Cervavac: Quadrivalent:** against **HPV 6,11,16,18 -** India's first indigenous HPV vaccine developed by Serum Institute of India (SII): Ready to use as suspension (Fig 1).
- **Gardasil 9:** against **HPV Types 6, 11, 16, 18, 31, 33, 45, 52, 58.** MSD: Prefilled syringe 0.5ml -suspension.
- **Gardasil / quadrivalent:** against **HPV Types 6, 11, 16, 18.** MSD: Prefilled syringe 0.5ml- Liquid.
- **Cervarix:** Bivalent vaccine against **HPV 16,18** from GSK: Prefilled syringe- Liquid- Discontinued in Sept 2022.

All HPV vaccines should be maintained at 2–8 °C, not frozen and protected from light.

Global vaccine not available in India:

Cecolin® (Xiamen Innovax Co. Ltd.) and Walrinvax® (Walvax Biotechnology Co. Ltd.).[4]

✓ **Dose Schedule:**

- Younger girls and boys (9-14 years) require **2 doses**, while older adolescents (15 or above) require **3 doses** (depending on the vaccine schedule recommended by clinicians). So early vaccine means less shots.[5,6]
- Below 9 years: Limited data, however studies show vaccination between 4–6 years produce a high and sustained immunological response during 30 months of follow-up.
- Three doses recommended in the schedule 0–1-2.5months–5-12months for Cervarix and 0–1-2 months–4-6months for Gardasil, Gardasil 9 & Cervavac. This is given along Tdap vaccine and no booster dose is required.

✓ **Missed dose**

- If a vaccination schedule is interrupted, vaccine doses do not need to be repeated. Number of recommended doses is based on age at administration of the first dose.[5]
- Alternatively, **a single-dose schedule** can be used in girls and boys aged 9–20 years.
- There is no maximum recommended interval between doses and longer intervals –up to 3 or 5 years – can be considered if useful from a programme perspective.
- However, if the vaccine used for the prior dose(s) is unknown or unavailable, any HPV vaccine can be administered to complete the recommended schedule.[5,6]

✓ **Route:**

Intramuscular in the deltoid region of the upper arm or in the higher anterolateral area of the thigh (Fig 2).

Safety and Efficacy

- All three HPV vaccines can be co-administered with other live and non-live vaccines using separate syringes and different injection sites.[6]
- It is not necessary to screen for HPV infection or HIV infection prior to HPV vaccination.
- The most common side effects are mild and temporary, such as pain at the injection site, headache, fever, or fatigue.
- The vaccines offered excellent protection against cervical intraepithelial neoplasia of grade 2 or 3 (CIN2 or CIN3) and adenocarcinoma in situ associated with HPV16/18 infection in young women. HPV vaccination in males of age less than 26 years offered significant efficacy in preventing persistent anal HPV infection and AIN.[4]
- Vaccine-induced cross-protection was limited to a few non-vaccine types, HPV31, HPV33, and HPV45, and a significant proportion of recipients had detectable antibody against these up to 7 years following vaccination.[4]

Vaccine in special group

- The recommendations for those on immunomodulatory treatment for autoimmune conditions (e.g. multiple sclerosis, inflammatory bowel disease, systemic lupus erythematosus (SLE)), or for prevention of graft rejection among those who are post-transplantation or HIV-positive should be for **3 doses of vaccine (minimum 2 with 6 months interval**), within the recommended age guidelines and as early as possible prior to the onset of immunocompromise.[7]
- **Assault victim**: The **3 dose series** is must whatever may be the age of victim with first dose at the time of initial examination as a part of sexual assault management.[6]

Myths about HPV vaccine

- **Myth 1: The vaccine encourages early sexual activity**.

  Ans- However, numerous studies have shown no link between receiving the HPV vaccine and changes in sexual behaviour. The vaccine is about cancer prevention, not sexual activity. Education and clear communication from healthcare providers play a crucial role in addressing concerns and improving acceptance.[3]

- **Myth 2: HPV vaccine causes infertility.**

  Ans- There is no scientific evidence that HPV vaccine will effect on future fertility. However, the development of pre cancer and cancer in an individual along with treatment may affect their fertility.

Practical costing

Global/International Private Market Prices

✓ **Government programs or insurance in many countries** (e.g., UK, Australia, Canada, EU states, Japan) often provide HPV vaccines *for free* or at negligible cost as part of national immunization programs.

✓ **In UNICEF/Gavi-supported procurement**, HPV vaccines for national programs are often priced in the **low single digits in USD ($3–$15)** per dose, making vaccination affordable for eligible countries.

HPV Vaccine Availability & Costs in India

- States like Maharashtra, Punjab, Sikkim, Karnataka, Tamil Nadu, and others are expanding **free or subsidized HPV vaccination programs** for girls aged ~9–14 in public clinics and schools.
- In some pilot and rollout efforts, HPV vaccines are provided **free of cost** under public health initiatives.

HPV Vaccine Costs in India (2025–2026)- Depicted in Table 1.

Table 1: Costing of Vaccine in various Sectors

Vaccine Type	Approx. Cost per Dose (Private)	Total for Full Course	Government/Subsidized Pricing	Notes
Cervavac (Made-in-India HPV)	₹1,400 – ₹4,000	2-dose: ₹2,800 – ₹8,000	Free – ₹400 per dose	Indian-manufactured vaccine; covers major HPV types; widely used in public programs.
Gardasil (Quadrivalent)	₹3,000 – ₹5,000	2-dose: ₹6,000 – ₹10,000	May be subsidized in limited state programs	Covers HPV 6, 11, 16, 18 (cancer & warts).
Gardasil 9 (9-valent)	₹9,000 – ₹10,850+	2-dose: ₹18,000 – ₹21,700	Rarely subsidized yet	Broadest HPV protection; highest cost.
Cervarix (Bivalent)	₹2,500 – ₹3,500	2-dose: ₹5,000 – ₹7,000	Not usually subsidized	Targets HPV types 16, 18 (cancer).

Conclusion

Regional HPV genotypes should be evaluated for vaccine development. This will help in framing management guidelines and developing policies for prevention of disease. Also, introducing vaccination against HPV into neonatal schedules would assure high participation rates.

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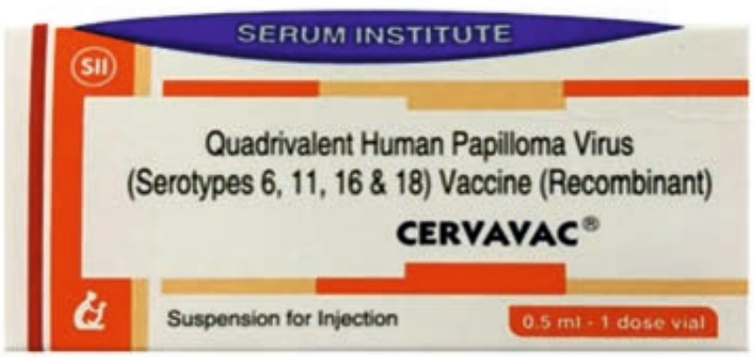

Fig 1: *1st indigenous vaccine of India*

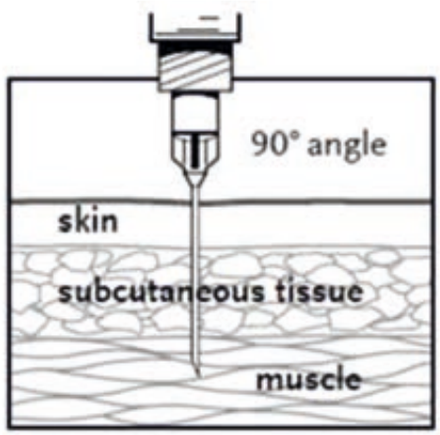

Fig 2: *Route of administration of Vaccine*

MANAGING HAIR LOSS IN CHILDREN IN DAY-TO-DAY CLINICAL PRACTICE

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Managing Hair Loss in Children in Day-to-Day Clinical Practice

Hair loss in children differs significantly from adult alopecia in terms of etiology, prognosis, and management (Figure 1).[1] While rare genetic and scarring disorders may occur, the majority of children presenting with hair fall in day-to-day clinics have benign, reversible conditions such as telogen effluvium, nutritional deficiency–related alopecia, seborrheic dermatitis, tinea capitis, alopecia areata, traction alopecia, or trichotillomania.[2,3] A structured and time-efficient clinical approach helps clinicians reassure caregivers, limit unnecessary investigations, and initiate appropriate treatment early.[2,4]

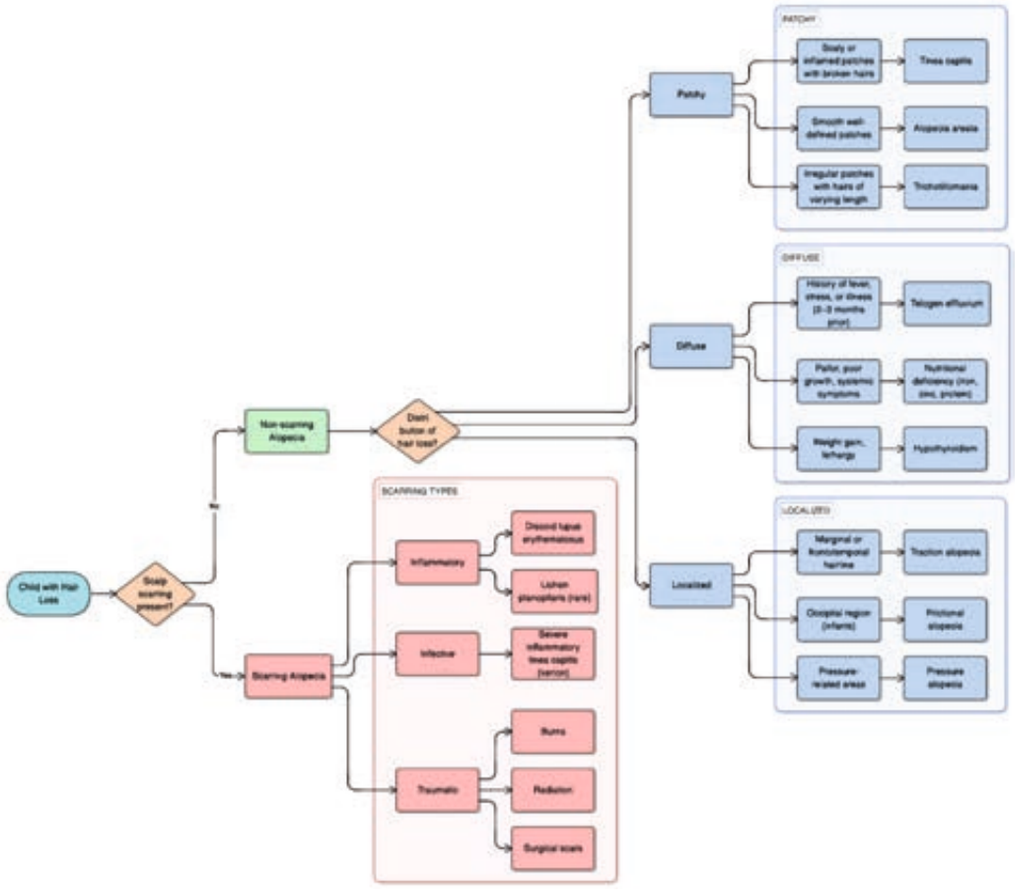

Figure 1: *Clinical approach to pediatric alopecia.*

Practical Approach to a Child With Hair Loss

Evaluation of a child with hair loss begins with a focused history. Important points include the age at onset, duration, and progression of hair loss; whether the onset was sudden or gradual; and whether hair fall is diffuse or patchy (Figure 2).[4-8] A history of recent febrile illness, hospitalization, surgery, weight loss, or COVID-19 infection should be specifically elicited.[2,4] Dietary habits, especially picky eating, vegetarian or vegan diets, and poor protein intake, are highly relevant. Associated scalp symptoms such as itching, scaling, pain, or discharge, hair care practices including tight hairstyles or excessive oiling, behavioral habits like hair pulling, and a family history of alopecia or autoimmune disease provide valuable diagnostic clues.[6,9]

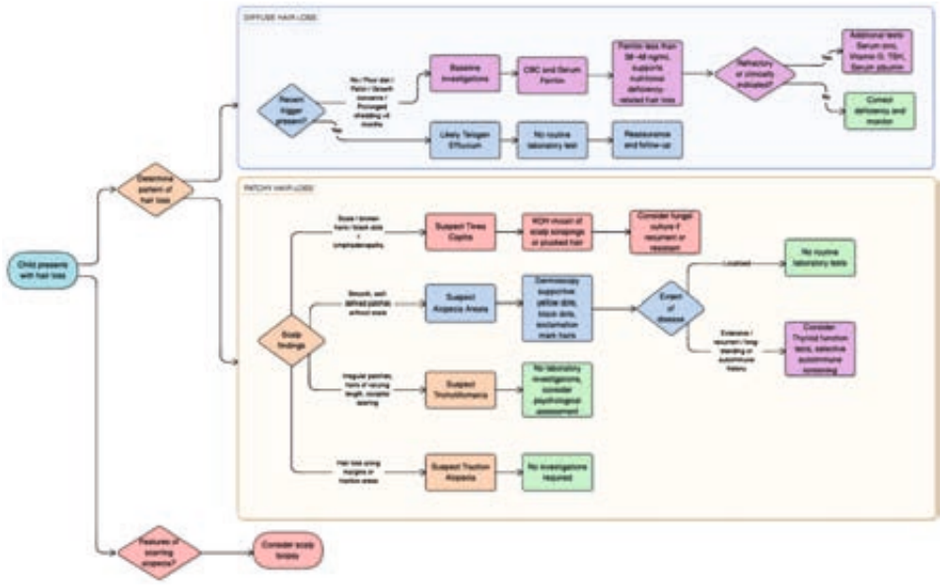

Figure 2: Diagnostic and treatment approach to pediatric alopecia.

Clinical examination should assess the pattern of hair loss (diffuse versus focal), scalp changes such as scaling, erythema, pustules, or black dots, and hair shaft abnormalities including broken hairs or exclamation mark hairs.[5,8] Eyebrows, eyelashes, nails, and skin should be examined for associated findings. Signs of nutritional deficiency, such as pallor or koilonychia, should not be overlooked.[4,9] Simple office-based tests such as the hair pull test are useful, while dermoscopy can add diagnostic value when available (Figure 3). A potassium hydroxide (KOH) mount of scalp scrapings or hair is essential when tinea capitis is suspected.[3,5]

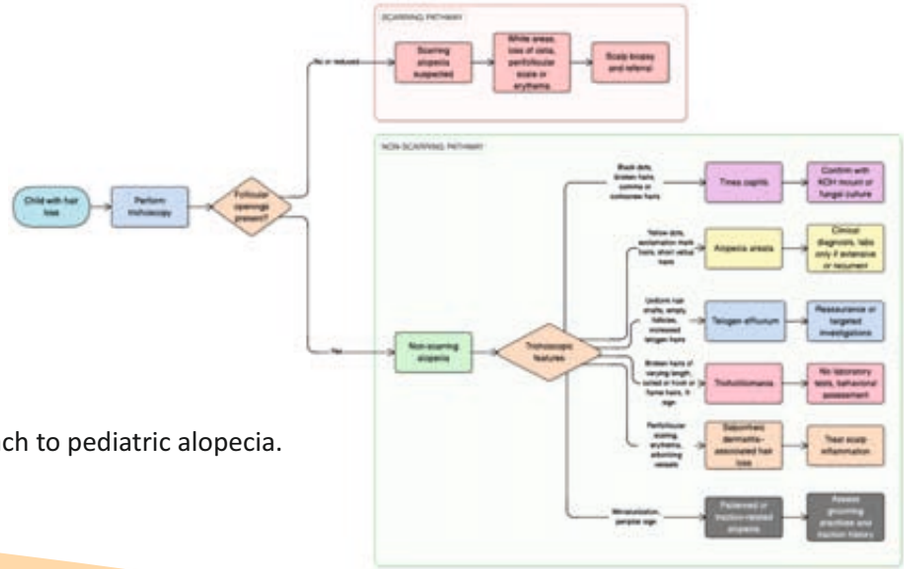

Figure 3: Trichoscopic approach to pediatric alopecia.

A simple stepwise diagnostic algorithm helps clinicians rapidly narrow the differential diagnosis while minimizing unnecessary investigations.[10] The first step is to determine whether hair loss is **diffuse or patchy**. Diffuse hair loss with a normal scalp and a positive hair pull test suggests telogen effluvium or nutritional deficiency–related alopecia. In such cases, targeted laboratory evaluation is appropriate only when history or examination suggests an underlying deficiency.[2,4]

Patchy hair loss requires careful scalp examination. Patchy alopecia with scaling, broken hairs, black dots, or lymphadenopathy is most suggestive of tinea capitis and warrants immediate mycological evaluation. Smooth, well-defined patches without scale point toward alopecia areata. Patchy hair loss with irregular borders, hairs of varying length, and sparing of the occipital scalp suggests trichotillomania. Hair loss along the margins or sites of mechanical stress indicates traction alopecia. Features of scarring such as loss of follicular openings, atrophy, or dyspigmentation necessitate urgent referral.[3,10]

Once the clinical pattern is identified, investigations should be **selective and guided by clinical suspicion,** rather than routine.

Recommended Diagnostic Tests in Pediatric Hair Loss

In children with **diffuse hair loss**, baseline investigations may include a complete blood count and serum ferritin to assess iron status, particularly in children with poor dietary intake, pallor, or rapid growth. Serum ferritin values below 30–40 ng/mL are often associated with increased hair shedding. Additional tests such as serum zinc, vitamin D levels, thyroid-stimulating hormone, and serum albumin should be reserved for children with suggestive clinical features, growth failure, or refractory hair loss.[2,8]

In suspected **telogen effluvium**, laboratory testing is often unnecessary if a clear triggering event is identified and the child is otherwise healthy. Investigations may be considered when hair shedding is prolonged beyond six months or when multiple episodes recur.[1]

In cases of **patchy hair loss with scale**, a potassium hydroxide (KOH) mount of scalp scrapings or plucked hairs is the most important diagnostic test and should be performed before initiating systemic antifungal therapy. Fungal culture may be useful in recurrent or treatment-resistant cases where facilities are available.[2,5,8]

For **alopecia areata**, the diagnosis is largely clinical. Dermoscopy may reveal yellow dots, black dots, and exclamation mark hairs, supporting the diagnosis. Routine laboratory screening is not required in localized disease; however, thyroid function tests and autoimmune screening may be considered in extensive, recurrent, or long-standing alopecia areata, especially in children with personal or family history of autoimmune disease.[1,10]

In **trichotillomania**, no laboratory investigations are required. Diagnosis is based on characteristic clinical features and exclusion of other causes. Psychological assessment may be indicated when behavioral symptoms are prominent.[4]

In **traction alopecia**, investigations are unnecessary, and diagnosis is clinical.[5]

When **scarring alopecia** is suspected, scalp biopsy should be considered.[2]

Cause	Age group	First-line treatment	Dose (weight/age based)	Duration	Common adverse effects / remarks
Nutritional deficiency–related hair loss	Infants (>6 months), children, adolescents	Elemental iron (if deficient)	3–6 mg/kg/day elemental iron in 1–2 divided doses	≥3 months or till ferritin normalizes	GI upset, constipation, teeth staining
	All children	Elemental zinc (if deficient)	0.5–1 mg/kg/day (max 20 mg/day)	2–3 months	Nausea, metallic taste (rare)
	All children	Dietary protein optimization	1–1.5 g/kg/day (dietary)	Ongoing	Dietary counseling essential
	Infants	Vitamin D (if deficient)	400–1000 IU/day	As per deficiency	Hypercalcemia with overdose
	>1 year	Vitamin D (if deficient)	1000–2000 IU/day	As per deficiency	Avoid empirical use
Telogen effluvium	All ages	Reassurance, trigger correction	–	–	Self-limiting condition
	>5 years (selected cases)	Topical minoxidil (off-label)	2% solution once daily	3–6 months	Scalp irritation, hypertrichosis
Seborrheic dermatitis	Infants, children	Ketoconazole shampoo 2%	2–3 times/week	2–4 weeks	Very safe; minimal irritation
	All ages	Zinc pyrithione shampoo	Alternate days	2–4 weeks	–

	Infants	Hydrocortisone 1% lotion	Once daily	≤7 days	Avoid prolonged use
	Older children	Mometasone furoate 0.1%	Once daily	5–7 days	Skin atrophy if prolonged
Tinea capitis	>1 year	Griseofulvin (microsize)	20–25 mg/kg/day	6–8 weeks	GI upset, headache, photosensitivity
	>2 year	Terbinafine	<20 kg: 62.5 mg/day; 20–40 kg: 125 mg/day; >40 kg: 250 mg/day	4-6 weeks	GI upset, rash, taste disturbance
	All ages	Antifungal shampoo (adjunct)	Ketoconazole / selenium sulfide twice weekly	During systemic therapy	Reduces transmission
Alopecia areata	<10 years	Topical corticosteroid	Mometasone furoate 0.1% once daily	6–12 weeks	Skin atrophy, telangiectasia
	Adolescents	Topical corticosteroid	Betamethasone valerate 0.05% once daily	6–12 weeks	Monitor for side effects
	>5 year	Topical minoxidil (adjunct)	2–5% once daily	3-6 weeks	Hypertrichosis, irritation
	Older cooperative children	Intralesional triamcinolone	2.5–5 mg/mL; max 1–2 mL/session	4-6 weeks	Pain, localized atrophy
Traction alopecia	All ages	Hairstyle modification			Complete regrowth if early
	>5 years	Topical minoxidil	2% once daily	3-6 weeks	Adjunct only
Trichotillomania	All ages	Behavioral therapy			Psychological referral key

Most causes of hair loss in children encountered in daily clinical practice are non-scarring and reversible. Nutritional deficiencies and telogen effluvium are the most common etiologies. A structured clinical approach, judicious use of investigations, age-appropriate and weight-based therapy, and empathetic counseling of caregivers are key to successful management and favorable outcomes.

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PEDIATRIC PSORIASIS TREATMENT UPDATES: A NEW ERA OF TARGETED THERAPY

Dr. Priyanka Hemrajani

Pediatric psoriasis is a chronic immune-mediated dermatosis affecting approximately 0.5%–2% of children worldwide. It significantly impacts quality of life, with psychological and social consequences comparable to chronic systemic illnesses. In recent years, treatment has evolved from nonspecific immunosuppressants toward precision biologics and oral small molecule therapies, transforming management for children with moderate-to-severe disease.

Epidemiology and Pathogenesis

Early-onset psoriasis, often with a strong familial component, is commonly associated with HLA-Cw6 and other loci such as CARD14 and PSORS1-9. The IL-23/Th17 axis plays a central role, promoting cytokines TNF-α, IL-17, and IL-22. Pediatric lesions exhibit higher IL-22 and lower IL-17 expression compared with adults, suggesting a distinct inflammatory phenotype [1]. Triggers include infections, trauma, obesity, and stress. Comorbidities such as psoriatic arthritis, obesity, and metabolic syndrome should be routinely assessed.

Current Management Principles

Treatment aims for sustained control and improved quality of life, rather than complete clearance. Mild cases respond to topical therapy—emollients, corticosteroids, vitamin D analogs, and PDE-4 inhibitors such as roflumilast 0.3% cream (FDA-approved in 2023 for children ≥6 years) [2]. Narrowband UVB phototherapy (311–313 nm) remains effective for moderate disease, achieving up to 80% clearance. Systemic therapy is reserved for severe or recalcitrant cases, or those with major psychosocial impact.

Conventional systemic options include methotrexate, cyclosporine, and acitretin, though these require intensive monitoring. Methotrexate remains the most used agent for chronic plaque psoriasis, while cyclosporine is preferred for acute flares. However, biologics and targeted oral therapies now offer superior efficacy with better safety and tolerability.

Biologic Therapies

Biologic agents have redefined pediatric psoriasis treatment, offering targeted inhibition of immune mediators. Their approval in children is based on robust phase 3 trials evaluating Psoriasis Area and Severity Index (PASI) and Children's Dermatology Life Quality Index (CDLQI) scores.

Etanercept, a TNF-α blocker, was the first biologic approved (≥4 years, FDA 2016). Weekly subcutaneous dosing (0.8 mg/kg; max 50 mg) produced significant PASI 75 and 90 responses by week 12, sustained through 96 weeks with excellent safety [3]. Adalimumab, approved by the EMA in 2015 for ≥4 years, achieved superior PASI 50 and 75 rates versus methotrexate at week 16, with durable 1-year outcomes and comparable safety [4].

Among IL-12/23 inhibitors, Ustekinumab targets the p40 subunit common to IL-12 and IL-23 and is approved for ages ≥6 years. The CADMUS trial demonstrated PASI 90 responses and CDLQI improvements at week 12, sustained through 52 weeks [5]. Its infrequent dosing every 12 weeks enhances compliance.

The IL-17A inhibitors Secukinumab and Ixekizumab (approved ≥6 years) provide rapid onset and superior clearance. In the IXORA-PEDS study, ixekizumab achieved PASI 90 in most children by week 12 with sustained improvement to week 48 [6]. Secukinumab produced PASI 75 and 90 responses as early as week 4 and maintained results through one year, with a safety profile comparable to etanercept [7]. Rare cases of inflammatory bowel disease (IBD) flares have been reported; hence, IL-17 inhibitors should be avoided in patients with known IBD.

Emerging IL-23 inhibitors, including guselkumab, risankizumab, and tildrakizumab, are in phase 2/3 pediatric trials showing promising PASI 90 rates and long-term remission [8]. These biologics may soon expand treatment choices due to infrequent dosing and minimal systemic toxicity.

Oral Small Molecule Therapies

For children averse to injections, oral targeted agents provide effective and convenient alternatives. Apremilast, a PDE-4 inhibitor, received FDA approval in 2024 for ages 6–17 years following the SPROUT trials (NCT02576678, NCT03701763), achieving PASI 75 in 45% and PASI 90 in 24% at 16 weeks [9]. It is weight-based (20–30 mg twice daily) and generally well tolerated, with mild gastrointestinal symptoms and rare psychiatric side effects.

Deucravacitinib, an oral tyrosine kinase 2 (TYK2) inhibitor, is under phase 3 evaluation in pediatrics (NCT04772079). Adult trials (POETYK PSO-1 and PSO-2) demonstrated higher PASI 75–100 rates than apremilast, with favorable safety and minimal laboratory monitoring [10]. Deucravacitinib's once-daily dosing and oral route may improve compliance in adolescent patients.

Safety and Monitoring

Before biologic initiation, screening for tuberculosis, hepatitis B/C, and HIV is essential. Live vaccines should be avoided during therapy. Baseline and annual monitoring for infections are recommended. For small molecule inhibitors, apremilast requires vigilance for mood changes, while deucravacitinib users should be observed for viral reactivation and acneiform eruptions. Non-responders to one biologic may still benefit from switching within or across classes.

Practical and Psychosocial Aspects

Access and cost remain limiting factors in biologic use, especially in resource-limited regions. Biologics offer long dosing intervals but require refrigeration and injections, while oral agents provide convenience but lower clearance rates. Family counseling, addressing disease stigma, and ensuring adherence are integral to successful outcomes.

Conclusion

The management of pediatric psoriasis has entered an era of precision immunomodulation. Biologics targeting TNF-α, IL-17, and IL-23, along with oral PDE-4 and TYK2 inhibitors, have greatly improved disease control and quality of life. Therapy should be individualized based on disease severity, comorbidities, and patient preferences. Continued research and long-term real-world data will refine safety profiles and optimize treatment algorithms for children with psoriasis.

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APPROACH TO VULVITIS IN PREPUBERTAL GIRLS: A DIAGNOSTIC AND MEDICO-LEGAL PERSPECTIVE

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Introduction

Vulvovaginal complaints in prepubertal girls pose a diagnostic and medico-legal challenge. The appearance of genital symptoms necessitates a thorough assessment for potential sexual abuse, even if the majority of cases are attributable to non-STI causes like irritant vulvitis, inadequate perineal hygiene, or endogenous infections – bacterial (*E. Coli*, *Staphylococcus sp.*, *Streptococcus sp.*, anerobic bacteria etc.) and rarely fungal infections (*Candida sp*). This is particularly relevant in the Indian context, where the Protection of Children from Sexual Offences (POCSO) Act, 2012, requires mandatory reporting upon reasonable suspicion of sexual offences. Therefore, it is essential to distinguish infectious vulvitis from sexually transmitted infections (STIs) to protect children and prevent unnecessary legal escalation. We present a case of candidal vulvitis in a 5-year-old girl, emphasising the organised clinical, microbiological, and medico-legal approach.

Case Description

A 5-year-old girl presented with complaints of scanty white vaginal discharge and vulvar itching for one month. There was no associated fever, dysuria, bleeding, foul-smelling discharge, abdominal pain, or constitutional symptoms. There was no history of recent antibiotic intake, diabetes, immunosuppression, or similar complaints in family members.

The mother, who was considered a trustworthy informant, was present when a thorough and detailed history was taken. No behavioural changes, no history or suspicion of sexual assault, and no disclosure from the child were present. The toddler interacted in a way that was age-appropriate and seemed at ease.

Upon examination, mild vulvar erythema with maceration was noted, extending to the perianal area. The introitus appeared mildly inflamed (Fig. 1). No fissures, ulcers or bleeding were reported. Hymenal anatomy was appropriate for age, and anal examination did not reveal fissures or tears. No other cutaneous or systemic abnormalities were identified.

Microbiological evaluation included a vaginal swab and an anal swab, which, on a 10% potassium hydroxide (KOH) mount, revealed budding yeasts and pseudohyphae (Fig. 2), consistent with Candida species. The Gram stain did not demonstrate the presence of Gram-positive cocci or other pathogenic bacteria, or any clue cells (Fig. 3). These findings supported a diagnosis of Candidal vulvitis.

***Fig. 1 (a,b)**: Clinical images showing scanty vaginal discharge with mild vulvar and perianal erythema and maceration*

Microbiological evaluation included a vaginal swab and an anal swab, which, on a 10% potassium hydroxide (KOH) mount, revealed budding yeasts and pseudohyphae (Fig. 2), consistent with Candida species. The Gram stain did not demonstrate the presence of Gram-positive cocci or other pathogenic bacteria, or any clue cells (Fig. 3). These findings supported a diagnosis of Candidal vulvitis.

***Fig. 2**: 10% KOH mount of vaginal and anal smears showing budding yeasts and pseudohyphae, suggestive of Candida species (40x)*

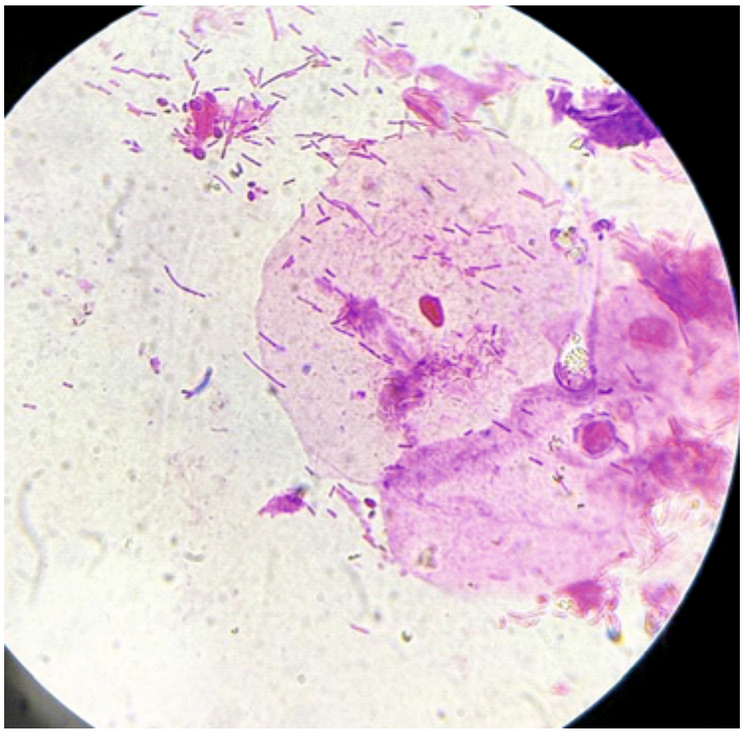

Fig. 3 *: Gram stain of vaginal smear showing normal gram variable c occo-bacilli, no clue cells*

Management

The child was managed conservatively with topical antifungal therapy (clotrimazole 1% cream) applied externally twice daily for 7–10 days and gentle vulvar hygiene measures, including avoidance of harsh soaps and tight clothing. Education of the caregiver regarding perineal hygiene and moisture control was also done. At 2 weeks follow-up, there was significant resolution in vulvar erythema and pruritic, and the vaginal discharge had subsided.

In view of the absence of clinical, microbiological, or historical indicators of sexual transmission, no STI NAAT testing or forensic sampling was undertaken. The decision-making process and parental statements were clearly documented.

From a medico-legal standpoint, as there was no reasonable suspicion of sexual abuse, mandatory reporting under the POCSO Act was not triggered.

The caregiver was counselled regarding warning signs that would necessitate re-evaluation, including disclosure by the child, behavioural changes, genital bleeding, or recurrent unexplained symptoms.

Information regarding One-Stop Centres (Sakhi) was provided, emphasising the availability of support if concerns arose in the future.

Discussion

Candidal vulvitis is relatively uncommon in prepubertal girls compared to adolescents and adults due to the hypo-estrogenic vaginal environment, lack of glycogen rich stratified squamous epithelium and absence of lactobacilli; however, it can occur in around 9.2% cases of vulvoganitis in prepubertal girls[4], particularly in the presence of antibiotic use and diaper wear[5]. Clinically, it may mimic STI-associated vulvovaginitis, leading to diagnostic and medico-legal dilemmas. This case shows that clinical–microbiological correlation has a role before labelling a pediatric genital infection as an STI.

The National Technical Guidelines on STI and RTI (NACO, 2024) emphasise a structured, survivor-centred approach to the evaluation of sexual violence, particularly in children presenting with genital symptoms. Detailed history taking should include prior and current episodes of sexual violence, relevant STI-related medical history, vaccination status (especially tetanus and hepatitis B), and previous anogenital injuries or surgical interventions. Medical examination must comprise a general physical examination and protocol-based local genital assessment, with the critical caveat that absence of visible injury does not imply consent or negate sexual assault. All

suspected cases of sexual violence are to be registered as medico-legal cases and, under POCSO, information must be sent to local police, Special Juvenile Police Unit (SJPU), Child Welfare Police Officer (CWPO), Child Welfare Committee (CWC) or child helpline 1098. However, treatment should not be delayed. One-stop centres act as a link to psychosocial and legal help, but are not a substitute for reporting. Fig. 4 and 5 show the procedures to be followed under NACO and Ministry of Health and Family Welfare (MoHFW) guidelines, including presenting to private practitioners. Fig. 6 shows the post-exposure prophylaxis to be offered to children if an STI is suspected.

Evidence collection is recommended when survivors present within 96 hours of assault, as biological yield decreases after 72 hours; however, surface and clothing evidence may still be collected beyond this period. Proper documentation, sealing, and handover of evidence to police in triplicate are mandated. Testing and prophylaxis for STIs, HIV, hepatitis B, and pregnancy should be offered where facilities permit.

In children, detection of post-neonatal gonorrhoea, syphilis, genital herpes, or non-transfusion-related HIV is considered strongly suggestive of sexual abuse. In contrast, infections such as chlamydia, genital warts, bacterial vaginosis, and hepatitis B may have non-sexual transmission pathways. Examinations should be conducted in the presence of a trusted adult, minimising physical and psychological trauma.

POCSO Act mandates reporting only upon reasonable suspicion of a sexual offence, not merely the presence of genital symptoms.

Misclassification of non-sexual vulvitis as STI may lead to undue psychological trauma, legal consequences, and erosion of caregiver trust. Conversely, failure to recognise actual abuse has serious ramifications. Hence, a balanced, evidence-based approach is mandatory.

Conclusion

This case highlights the importance of clinical and microbiological examination to diagnose Candidal vulvitis as a non-sexually transmitted cause of vulvovaginal symptoms in a prepubertal child, which is uncommon. Adherence to POCSO provisions, awareness of One-Stop Centre support systems, and alignment with NACO STI guidelines allow clinicians to provide child-centred, legally compliant, and ethically sound care.

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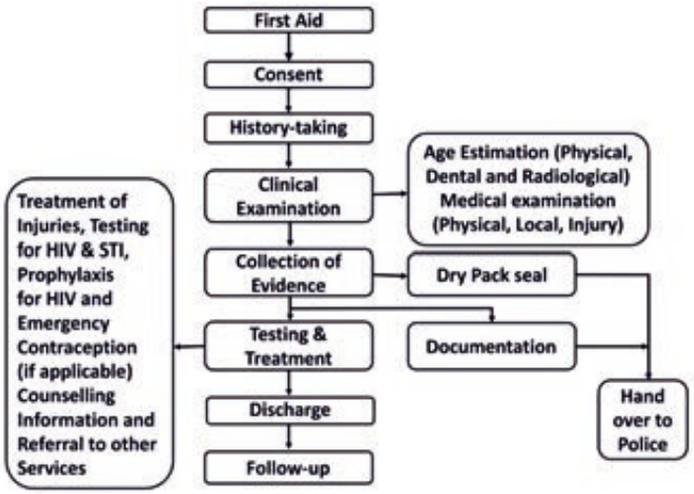


Fig. 4: *Flowchart for management of sexual violence victims as per NACO guidelines*

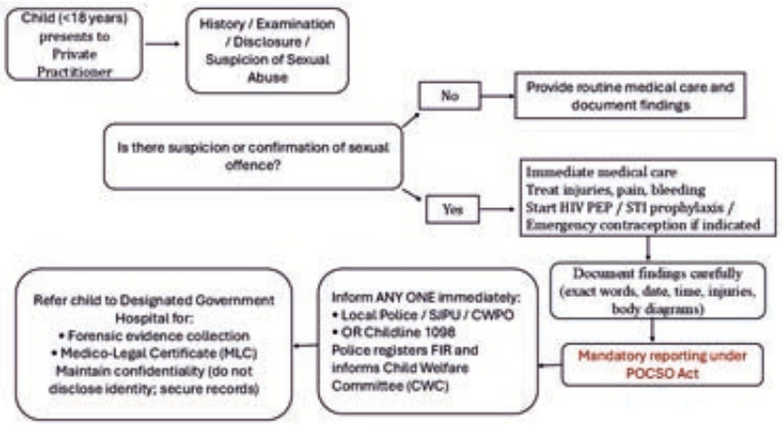


Fig. 5: *Flowchart for management of Child sexual abuse as per NACO and MoHFW guidelines*

Weight of the victim	Infection	PEP drugs and schedule
More than 45 kg	Chancroid, gonorrhoea and chlamydia	Injection Ceftriaxone 500 mg IM plus Doxycycline* 100 mg, orally, twice daily for seven days or Tab. Azithromycin 1gm plus Tab. Cefixime 800mg orally
	T. vaginalis and Bacterial vaginosis	Tab Secnidazole 2gm orally single dose or Tab Metronidazole 2gm orally single dose or Tab Tinidazole 2gm orally single dose
Children and Adults Less than 45 kg	Chancroid and chlamydia	Tab Azithromycin single oral dose-20 mg/kg on empty stomach
	Gonorrhoea	Tab Cefixime 8 mg/kg of body weight as a single dose, OR Inj. Ceftriaxone 125 mg, single dose, IM
	T. Vaginalis	Oral Metronidazole-15 mg/kg/dose, 3 times a day for 7 days

*Should be preferred in cases of receptive anal sex

Fig. 6: *Post exposure prophylaxis for STI in children, as per NACO guidelines*

Hip Hip Hurray

With immense pride, we announce that the Delhi State Branch team, led by Dr Deepika Pandhi & Dr Rahul Arora, won the Best Large Branch Award.

The following branch members need to be applauded for their outstanding contribution to dermatology, which also got recognition at Dermacon, 2026:

- Dr Sujay Khandpur (IADVL TEACHER PAR EXCELLENCE- North Zone)
- Dr Geeti Khullar (YOUNG DERMATOLOGIST AWARD- North Zone)
- Dr Himanshu Gupta (Inducted into IADVL Anti-Quackery Hall of Fame)

We would also like to congratulate our young and dynamic residents Dr Pratha Gupta (UCMS) and Dr Rashi Hasija (VMMC) for winning the IADVL-DSB Postgraduate Thesis Grant 2025 for their respective thesis studies.
And kudos to Dr Sampurna Dash (LHMC), Dr Anika Saini (LHMC) and Dr Varnika Khurana (ESI, Basaidarapur) for being the IADVL DSB Relay Quiz Winners at the Annual Cuticon 2025.

EVENTS during December 2025- Feb 2026

IADVL DSB PRE-CONFERENCE WORKSHOP

IADVL-DSB ANNUAL CUTICON 2026

The Annual Cuticon was organized by DSB team on 7th December at Hotel Eros. The theme for the conference this year was “Hot Topics in Dermatology Practice & Patient Care”.

OPERATION HOPE (Hair Outreach for Patient Empowerment)

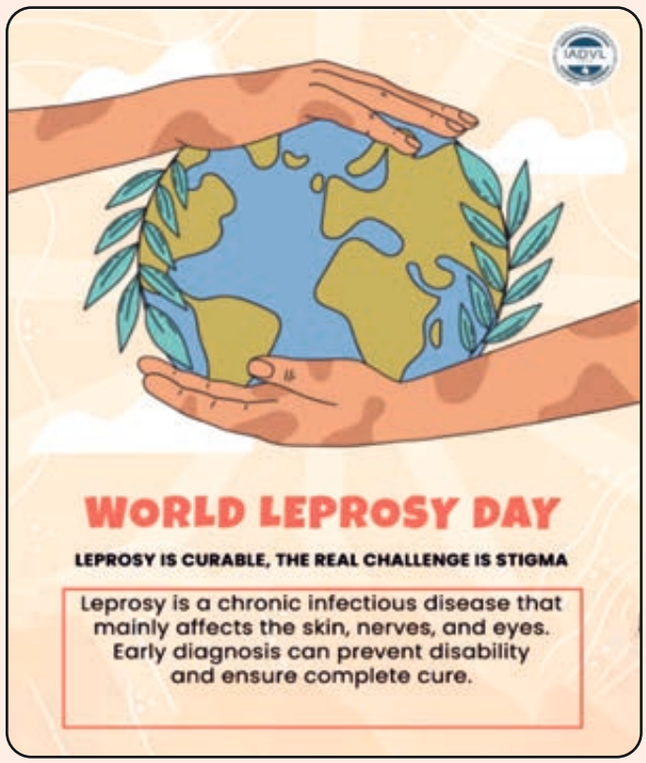
IADVL-DSB, in conjunction with FUE Asia, joined the global charitable initiative for patients with secondary cicatricial alopecia, who will be provided charitable hair transplantation. For this purpose, branch members were asked to volunteer their expertise/ centres as well patients suited for this purpose.

This initiative was launched during Pre-Conference Workshop on 6th December.

IADVL-DSB PICNIC & IADVL YOUNG ENTREPRENEURS' FAIR

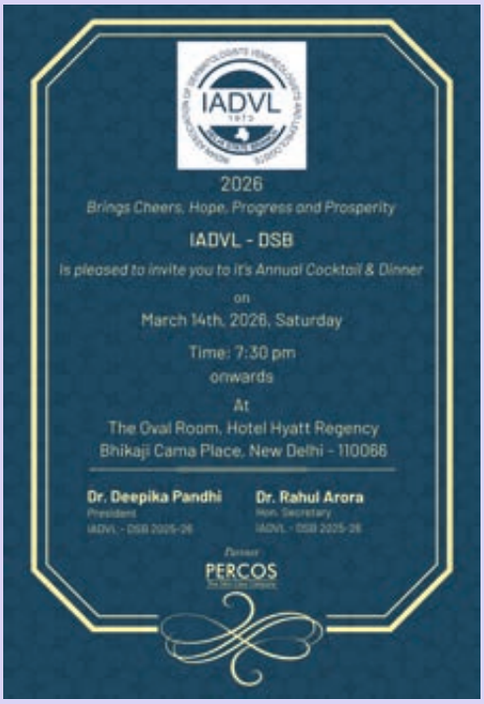
On 18th January, DSB team hosted the picnic for all branch members and invited the children & grandchildren of our IADVL DSB members to showcase their talents at our first-ever Young Entrepreneurs Fair.

The kids enjoyed various activities like shooting, create your own pizza, painting etc. And few became entrepreneurs and showcased Self-made crafts, art, or DIY products and even hosted game stalls.



On this World Leprosy Day 2026 (January 25th), IADVL- Delhi State Branch team carried out a campaign to spread around public awareness messages in line with the theme "Ending stigma, promoting dignity, early detection, inclusive healthcare and ensuring zero disabilities".

UPCOMING EVENTS



ANNUAL GALA DINNER

The DSB Team will be hosting the annual gala dinner on 14th March at Hyatt Regency Hotel. The main attraction this year will be various activities for the kids and the families.

POSTGRADUATE CLINIC

To be organized by IADVL Delhi State Branch on 29th March, this much awaited event promises to provide a practical update on how to crack the Dermatology postgraduate examination!

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