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**Dear Friends!** Here is the time of the year when we get to interact again through our newsletter Onychoscope. I am privileged to present the fourth issue to you. The growing number of issues is a testimony to the growing strength of NSI. At the time of going to print, we have 175 registered life members, a dedicated 14 member national executive and a vibrant and supportive 6 member International Advisory Board.

If you are impressed with these figures, then what could be even more impressive is the 800 member strong, active and vibrant facebook community of NSI. These are dermatologists with special interest in nails, who are self motivated enrollments, from close to 20 different nationalities. This can vouch for the truly international nature of our endeavors.

This issue celebrates the success of ONYCHOCON-2013, the 2nd National Conference on Nail Disorders organized by the Department of Dermatology, UCMS and GTB Hospital, Delhi, under the aegis of NSI. Like its predecessor, this conference was also a star national event with 160 registered delegates. It was heartening to see wide participation, not only from North to South of India, but also from the neighboring country of Nepal. The Conference highlights have been penned by Dr Shikha Bansal.

This issue has another first. We have an invited faculty page by a non-dermatologist! Dr Ashish Rai, Senior Plastic Surgeon at Dr Ram Manohar Lohia Hospital is our invited faculty. He has chosen to share with us his experience on management of traumatic nail dystrophies. As an eminent surgeon, working on nail matrix and bed transplants, I am sure; his experience would be valuable to our readers.

The issue also carries the regular columns of Onycho-quiz and Nail maze. Get ready with your pens! We are also hopeful that the carefully chosen excerpts from nail literature with a critical analysis by Dr Sonthalia, would be found useful in your daily practice.

It gives me great pleasure to announce that the **3rd ONYCHOCON** will be organized in **Mumbai** on the **12-14th September, 2014** by **Dr Sushil Tahiliani and his team**. We strongly look forward to this academic bonanza and an opportunity to meet and interact with all our members.

Further ahead, the **4th ONYHOCON** will be co-organized with The **3rd International Summit on Nail Diseases** on the **20-22nd November, 2015** at **Delhi**. We promise to leave no stone unturned in ensuring the success of the event.

#### To quote Henry Ford

**Coming together is a beginning, Working together is progress, Staying together is success**

NSI made a humble beginning in February, 2012 by the coming together of likeminded, dermatologists interested in NAIL. Working together has seen its progressive growth over the past two years and we hope to maintain the momentum and build the society further to achieve greater heights.

A very Happy Second birthday to NSI. **Viva NSI!!**

**Dr Chander Grover**



**Drs Eckart Haneke, Bertrand Richert, Archana Singal and Chander Grover at the XIth ICD-2013, Delhi, India**



**Team ONYCHOCON-2013**

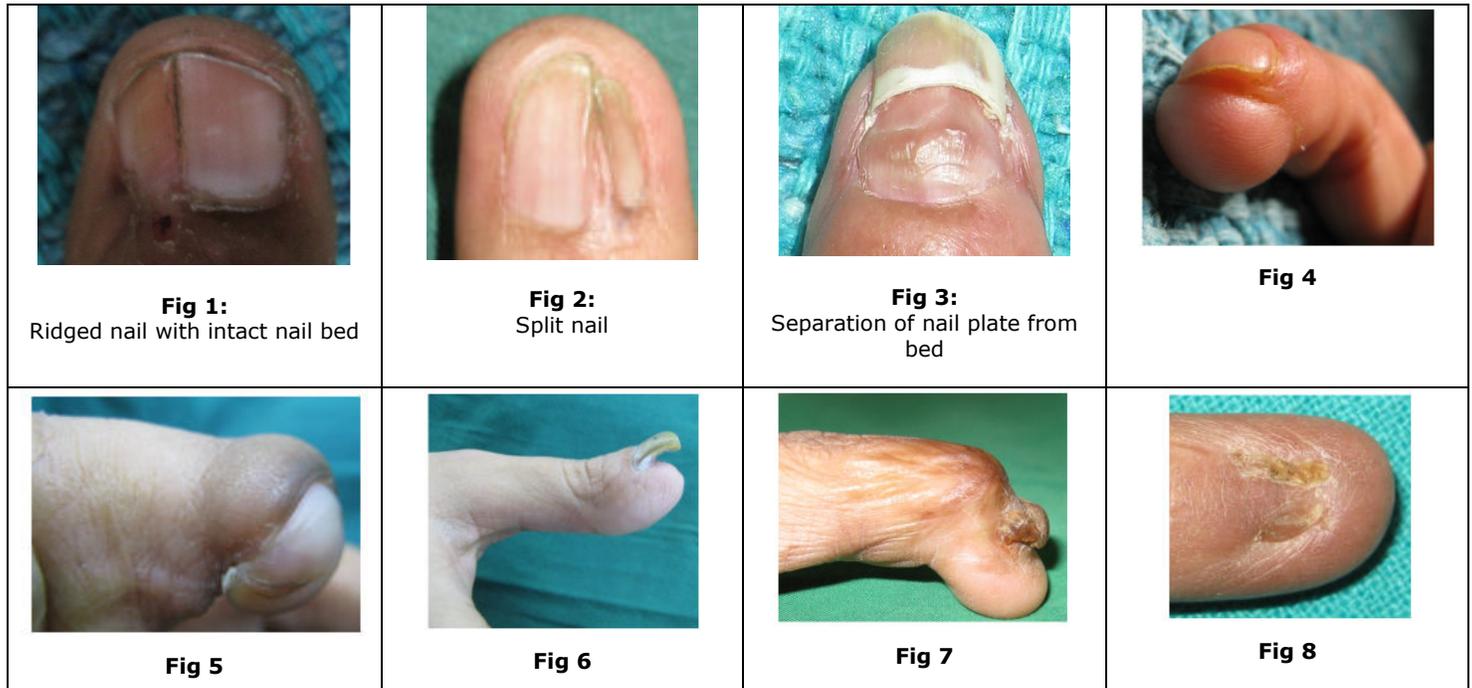
## Post Traumatic Nail Deformities and Their Management

**Dr Ashish Rai**

Associate Professor

Department of Burns, Plastic, Maxillofacial and Microvascular Surgery

PGIMER & Dr RML hospital New Delhi



Nail is important for both aesthetic and functional capability of the finger. The most common cause of nail bed deformity is trauma and chronic nail deformities are difficult to treat.

**Post traumatic nail deformities (PTND)** are classified in three groups according to the size of the existing nail bed: intact, partially amputated and completely amputated nail bed.

**Intact nail bed** group includes nail beds normal or near normal in size but scarred, leading to deformed nails. A superficial and linear scar results in ridged nail (**Fig.1**), a deep linear scar in split nail (**Fig.2**) and a diffuse scar of nail bed often leads to no adherence or onycholysis (**Fig. 3**).

**Partial amputation** group includes nails, in which germinal matrix with varying length of sterile matrix are intact. Type of deformity depends upon whether it is vertical or horizontal loss of finger tip components (soft tissue pulp, sterile matrix and bone of distal phalanx). In cases of vertical component loss, the deformities range from mild to severe hooked nail depending upon the severity of the loss (**Fig. 4,5**).

In cases of horizontal loss of sterile matrix the deformities range from distally non adherent nail (Fig.6) to severe nail horn (Fig.7).

When the horizontal component loss is extensive to include whole of the sterile and germinal matrix as in **complete amputation** group, the deformity is absent nail (Fig.8) and treatment is total nail reconstruction.

The **nail unit** consists of nail plate, proximal and lateral nail folds, nail bed consisting of sterile and germinal matrices and hyponychium. The germinal matrix is the primary generative centre of the nail and forms the bulk of the nail plate. The sterile matrix is involved in shaping and adhering the advancing nail. Nail bed matrixes (sterile and germinal) are specialized tissues and attempts to replace them with skin or dermal graft is rarely a success. Numerous techniques of nail matrix transfer have been described but each has its own drawbacks. Free nail grafting techniques are split thickness sterile matrix (STSM), split thickness germinal matrix (STGM), full thickness and composite grafts. Vascularised nail transfer techniques include long and short pedicle free flaps.

**Pre-operative work up** includes- X-Ray to visualize the bony abnormality and dermatological opinion to rule out fungal infection. Lastly, patients are shown previous post-operative results to provide a realistic level of expectation from the surgery.

**Technique:** The surgery is performed under digital block and tourniquet with loupe magnification as a day care procedure. In intact nail bed group, the scar tissue over exposed nail bed is delineated and excised. Primary tensionless closure of matrix by subperiosteal mobilization is achievable in many cases (composite fig 1). For wide scars, nail matrix graft (STSM or STGM or both) harvested from great toe is applied.

The donor toe nail is used to splint both the donor and recipient areas.

For **hooked nail deformities** following vertical finger tip amputations, treatment becomes complex as the lost components have to be reconstructed. The complexity of the procedure depends upon the number of components to be reconstructed: soft tissue pulp, sterile matrix and bone. Local flaps (volar V-Y advancement, cross finger, thinner) are used for reconstruction of lost soft tissue pulp. De-epithelialisation and STSM grafting of the advancing edge of the skin flap helps in lengthening the nail bed. Unicortical bone graft from olecranon is used for distal phalanx reconstruction and lengthening of finger tip. Full thickness matrix graft is the treatment of choice for distal non adherent nail following partial horizontal component loss (composite Fig 2)

Reconstruction of absent nail following total loss of sterile and germinal matrix is by composite graft of second or third toe. The graft includes full thickness of sterile and germinal matrix, nail plate, proximal and lateral nail folds. To improve the survival of graft, hyperbaric oxygen therapy is also instituted. HBO therapy is given in a monoplace chamber with 100% oxygen delivery at 2 ATA and the average duration of therapy is 90 minutes. Number of sessions is usually 7-8.

All sterile and germinal matrix grafts for nail bed reconstruction are harvested from great toe. Full thickness grafts are harvested from third or fourth toe and composite nail grafts are harvested from tissue pulp in hooked nail deformity.

#### Composite Figure 1

Above left: Split nail following linear scar over germinal and sterile matrix.  
Above right: Scar after removal of nail.  
Below left: After full thickness excision of scar.  
Centre: Primary closure after mobilization of matrix.  
Below right: 9 months post operative result.



#### Composite figure 2:

Above left: Distally non adherent nail.  
Above right: Full thickness sterile matrix graft harvested from 4<sup>th</sup> toe.  
Below left: Harvested full thickness graft.  
Below right: Graft applied and sutured



## Photo Quiz

A 45 year old female presented with an asymptomatic gradually progressive periungual growth in the left great toe since 5 months. It was associated with partial loss of nail. Patient did not notice any trauma preceding the onset of lesion.

On examination, a periungual firm mass of size approximately 3x1cm arising from beneath the proximal nail fold was found. It was pressing over the lateral aspect of the nail bed with partial avulsion of the nail plate. The lesion was noted to have a hyperkeratotic tip. Rest of skin and systemic examination did not reveal any abnormality. It was excised under regional block. Histology revealed hyperkeratosis, acanthosis and presence of prominent collagen bundles in the dermis.

**Question 1- What is the Diagnosis?**

**Question 2- What are the differentials for this condition?**



## Conference Report ONYCHOCON 2013 (8th – 10th November 2013, Delhi)

**ONYCHOCON-2013, the 2nd Annual National Conference of Nail society of India**, was organized by the department of Dermatology and STD, University College of Medical Sciences and GTB Hospital, at the state of the art Auditorium of Dr. Ram Manohar Lohia Hospital, Delhi. This two day conference was preceded by a half day Live Surgery workshop on common nail procedures.



#### Pre Conference Workshop, 8th November, 2013

A practical knowledge imparted by demonstration is always more informative and well understood as compared to theoretical presentation. What eyes see, a mind tends to remember more. The Live surgery, preconference work shop was organized at the Conference Hall, UCMS-GTB Hospital, and Delhi. Dr. S.N. Bhattacharya, Head of Department of Dermatology, UCMS and GTB, was the work shop coordinator. It was attended by 68 young enthusiastic, eager to learn delegates.

Dr. B.B. Mahajan demonstrated the technique of **Intramatrix injection**, a simple technique, which if done properly can be rewarding for the patient. He also

demonstrated the use of methotrexate for Intramatrix injections. Dr. Niti Khunger demonstrated management of **ingrown toe nail**. Starting from tying an effective tourniquet till proper performance of chemical matricectomy, the session was full of useful tips. To and fro motion of the cotton bud impregnated with phenol is a must for proper matricectomy. **Gel nails** are a simple practical procedure, requiring minimal inexpensive equipment and training. Dr. Soni Nanda demonstrated the technique with the message that it can be easily incorporated in day to day clinical practice. Dr. Manish Pahwa demonstrated **Trap door technique** for nail plate conservation during surgery. **Intralesional Bleomycin** is step forward in the direction of treatment of the stubborn periungual warts. Dr Siddharth Sonthalia discussed the technique of intralesional bleomycin injection with impressive results. He explained the reconstitution and preservation of the reconstituted solution for use in subsequent visits. **Nail biopsy** is perceived as a procedure performed by few. Dr. Chander Grover expertly demonstrated the various types of nail biopsy techniques and proper sample processing. The technique of Nail matrix biopsy after retracting the proximal nail fold was demonstrated.

Overall the workshop was well appreciated by the delegates. It added significantly to their existing options for commonly encountered nail disorders. Both the presenters as well the audience went with plentiful take home messages.

#### **National Conference, 9-10th November, 2013**

The Conference was attended by 160 registered delegates that included post graduate students, private practitioners and faculty from various institutions across India. The organizing team of two extremely pleasant ladies, Dr Archana Singal and Dr Chander Grover from University College of Medical Sciences, Delhi. We were fortunate to interact with the pioneers in nail research. Therapeutic aspects of common and rare nail disorders. The eminent faculty did full justice to the topics and delegates had the opportunity to witness lucid and informative presentations. The scientific program was an appropriate mix of basics along with the latest advancements in the field of etiopathogenesis, diagnosis, imaging and therapy of nail disorders.

On the **first day**, the sessions covered the anatomy, histology and physiology of normal nail. Well-illustrated lectures by **Drs Rajat Kandhari, Deepshikha Khanna and Sushil Tahiliani** gave the delegates an overview regarding normal nail and its anesthesia. A properly anaesthetized nail unit is essential to carry out any surgical procedure successfully. Dr. Sushil Tahiliani discussed the techniques in detail. Diagnostic approach was covered extensively with a bird's eye view towards approach to an abnormal nail.

Laboratory investigations existing and latest were discussed by **Dr Deepika Pandhi**. The importance of procuring adequate sample was emphasized. Informative details like PAS examination of nail clippings were included. To understand abnormal it is essential to have an insight into normal histology. **Dr Sonal Sharma**, who deals with many nail biopsies in her daily dermatopathology practice, explained about the nuances of normal nail. She emphasized the aspects of histology which should alert the clinician. The lecture on nail

fold capillaroscopy was very informative and interesting as it involved the use of a simple basic apparatus USB Digital microscope improvised by **Dr V Vasdeva**. He highlighted his experience with 6-8,000 such procedures. **Dr B.S.N Reddy** delivered the plenary talk on nail biopsy which is increasingly being accepted as a useful diagnostic tool in various nail disorders. The basic tenets of nail surgery were discussed in the next session. **Dr Chander Grover** highlighted the importance of appropriate patient selection and site selection for maximizing the outcome of nail biopsies. **Dr Niti Khunger** gave an exhaustive talk on various types of ingrown nail and management challenges. **Dr Mahajan** brought forth the use of different agents used for intramatrix injections in various nail diseases. The scientific content was an exhaustive mix of diagnostic and

A very practical session on management of common problems like periungual warts, onycholysis, thick nails and brittle nails was conducted in the afternoon. Eminent speakers like **Dr Sachidanand, Dr Tahiliani, Dr Savita and Dr Shikha Bansal** discussed their approach towards the management of such difficult to treat conditions. The focus of the session was a practical approach and experience of the speakers regarding their management tips. **Dr Anil Ganjoo** discussed the evidence based use of micronutrients in nail disorders. This session analyzed the effectiveness of various micronutrients. Definite role of Biotin in the dose of 5-10 mg/day was highlighted in the treatment of brittle nails geriatric population, presented by **Dr Sidharth Sonthalia**. A very interesting talk on nail tic disorders was given by **Dr. Archana Singal**. **Dr Vibhu Mendiratta** shared her clinical experience in children. The pediatric nail conditions were well covered with good clinical photographs. The **panel discussions** covered relevant topics like pigmented nails and the best strategy for treating difficult onychomycosis. Eminent moderators and panelists like **Dr Sachidanand, Dr Sanjiv Kandhari, Dr Vijay Garg, Dr Srivastava, Dr Mohanty, Dr Sunil Dogra and Dr Manjul Agarwal** were effective in outlining concrete suggestions on managing these common yet confusing nail conditions.

**Second day** onwards, the scientific content focused on latest developments from all over the world. The day began with **award papers** presentation by young researchers. Interesting topics like use of cryotherapy in psoriatic finger nails, Nail clipping PAS Staining etc were discussed. An interesting mix of topics included Lasers in nail and what's new in nail psoriasis and lichen planus by **Dr K Sardana, Dr T Garg and Dr B Sahoo**. Nail disorders in systemic disease were covered by **Dr Archana** and How to differentiate onychomycosis was delivered by **Dr. Paschal D Souza**. **Dr. Vineet Relhan** touched upon important clinical and surgical aspects of chronic paronychia. The condition is being considered as an eczematous rather than infection and should be managed accordingly with tacrolimus and topical steroid found more efficacious as compared to antifungals. A welcome addition was the session **"Get your own case"** discussing aspects of 5 intriguing cases at length by an expert panel comprising of **Dr Sachidanand, Dr Sonal Sharma, Dr Sunil Dogra and Dr Chander Grover**. The session on nail cosmetics was well attended and generated quite a discussion. **Dr Soni Nanda** discussed the use of artificial nails, **Dr Uma Shankar** discussed the side effects of nail cosmetics and **Dr Ashish Rai**, Consultant Plastic surgeon, presented his experience on surgical treatment of traumatically damaged nails.

The session of Clinical Onychology covered nail disorders in there were 31 presentations in the form of papers and posters. It was heartening to see the level of Nail research in India. Papers included studies on nail changes in systemic diseases, onychomycosis, use of Er-YAG laser for glomus tumor, nail changes in Darier's disease, and some unique cases like five fingernail onychogryphosis. The posters also made for interesting reading with topics ranging from Glomus tumor, Koenen's tumor, twenty nail dystrophy etc.

The **Best Award Paper** was won by Dr Shazia Jeelani, GMC, and Srinagar for her work on Onychomycosis. The **Best Poster Award** went to Dr Ananta Khurana, from the host department for study on the ingrown toenail management with 10% NaOH.

The **Onychoquest- Resident Quiz** saw participation of 17 teams from various institutions all over India. A closely contested and brilliantly conducted Final round was won by team from Srinagar Medical College (Dr Atiya Yaseen and Dr Mir Laiq). **Dr Atul Mohan Kocchar and Dr Pooja Arora** was the quiz masters and needless to say, the quiz was engrossing and full of humor. The Gala dinner was accompanied by a cultural program, presented by **PLEXUS- the student band of UCMS**.

The first ever **GBM** of NSI was also conducted during the proceedings of the conference. Member participation and suggestions were welcomed and Mumbai was chosen as the host for ONYCHOCON-2014. The conference will be organized by Dr Tahliani and his team. Plans are afoot for launching the first dedicated Nail journal of the world shortly.

**Compiled by Dr. Shikha Bansal**

**Specialist, Vardhman Mahavir Medical College, Safdarjung Hospital**



**3<sup>rd</sup> ONYCHOCON**  
National Conference of  
Nail Society of India

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**12-14<sup>th</sup> September, 2014**  
**Mumbai, India**

## Update from the Realm of Nails

### CLINICAL STUDIES/TRIALS

#### Effect of Q-Switched Nd: YAG 1064 nm/532 nm Laser in the Treatment of Onychomycosis In Vivo.

**Kalokasidis K, Onder M, Trakatelli MG, Richert B, Fritz K. *Dermatol Res Pract* 2013; 2013:379725**

This was a Prospective clinical study using Q-Switched Nd:YAG laser (1064 nm/532 nm) in 131 onychomycosis subjects with known mycotic cultures and fungal speciation. **Two sessions** with a one-month interval (15 minutes/session). No pre-procedure anesthesia or oral-anti-fungals allowed. **Laser parameters:** Power (4), Fluence (14J/cm<sup>2</sup>), pulse duration (9 billionths of a second), spot size (2.5 mm), and frequency (5 Hz). **Two passes**, first with 1064 nm, followed by 532 nm after a 2 minute pause. Nail unit including hyponychium and nail folds was fully covered. No Postoperative medications were used. **Follow-up** at 3-months, with mycological cultures. Photographic record maintained. **95.42%** of the patients were reported to be mycologically cured at 3 months. Adverse effects were insignificant (temporary 'stinging sensation in 17%). The Laser is proposed to act by direct inhibition of active fungi (deactivates 80–99% of the organisms present in an affected nail). It also disables dormant fungal colonies to replicate or survive via apoptotic mechanisms. The authors **concluded that** ONM can be effectively and safely treated with Q-Switched Nd: YAG 1064 nm/532 nm laser. It can also be combined with systemic oral antifungals. Better outcomes are expected in women, those with milder disease, and infection with *T rubrum*

**Critical analysis:** The advantages and disadvantages of the novel laser approach over the traditional therapies are:

*Lack of conventional antifungal drug adverse effects*, especially mutagenicity; genotoxicity; systemic toxicity and possibility of drug interactions.

*Lesser contraindications* to this form of therapy.

*Shorter duration of treatment* –compared to oral antifungals.

*Overall cost* –cheaper than drug therapy.

*Dermatophytoma resistance*- The air-filled spaces and biofilm formation impede drug therapy, not lasers.

*Effective in oral antifungals failure* – e.g. immunosuppression, poor peripheral circulation, nondermatophyte molds and drug resistance.

**Final comment:** Though many trials have proved efficacy of laser treatment of ONM, the lack of devices, lack of experience in and evidence in favor of drug therapy will act as a barrier for lasers to be accepted readily. A combination of laser with anti-fungals may be the best therapeutic approach with reduced duration of therapy and least possibility of recurrence.

#### Procedure to diagnose onychomycosis through changes in emissivity on infrared images.

**VillaseñorMC, VegaAG, Garay-SevillaME, Padilla- Medina JA, Arteaga-Murillo LI. *J Biomed Opt.* 2013; 18:116005**

This study offers a novel tool to aid in early and cost-effective diagnosis of ONM. The **physical and optical properties** of a normal nail as well as its temperature are different from a diseased nail, in particular ONM. When analyzed in **medium-range infrared imaging**, the emissivity characteristics of the nail vary. The authors compared the **emissivity** of the normal versus ONM nails and also studied their **temperature**.



The emissivity characteristics of ONM nails showed intense changes with lower emission. ONM resulted in lower temperature than toe skin, despite a higher emission of energy. This may be a simple, cheap and reliable method of diagnosing ONM, possibly abrogating the need for more sophisticated and expensive microbiological tests.

**Critical analysis:** The results have not been adequately explained; correlation with clinical diagnosis is not clear. Though the technique may differentiate between a normal and an abnormal nail, it may not be able to distinguish between different onychopathies.

**Final comment:** The study is an 'out-of-the-box' approach but there are lacunae and lot of ground work is needed before considering this as a diagnostic tool.

#### Treatment of nail psoriasis with intralesional triamcinolone acetonide using a needle-free jet injector: a prospective trial.

**Nantel-Battista M, Richer V, Marcil I, Benohanian A.J *Cutan Med Surg* 2014;18:38-42.**

Nail psoriasis psoriasis treatment still remains challenging. The gold standard has been nail intramatrix injection of corticosteroids, but, unbearable pain is the major limitation. Other treatments are reported not very effective or have significant adverse effects. This study evaluated needle free injections using Med-Jet MBX injector without any pre procedure anesthesia in **17 patients**. Four treatments sessions, every  $4 \pm 1$  week with triamcinolone acetonide were given. Assessment of efficacy was done by NAPS I score of target nail. Mean NAPS I score reduction from **6.5 to 2.0 and target nail NAPS I reduction by 46.25% was seen. No** effects were reported. The study concluded that treatment with triamcinolone acetonide delivered by Med-Jet MBX is a safe, minimally painful and effective treatment for nail psoriasis.

**Final comment:** The dermojet-mediated delivery of triamcinolone acetonide into nail matrix is almost painless, compared to the conventional needle injection. However, there is a considerable wastage of the injection material if the instrument is not proper or the technique is erroneous. Lack of comparative efficacy trials comparing the injection methods are needed to establish any superiority.

**SNIPPETS (BRIEF REPORTS)****Retronychchia: four new cases.**

**Reigneau M, Pouaha J, Truchetet F. Eur J Dermatol. 2013 Dec 12. [Epub ahead of print]**

Retronychchia (RN), a little-known pathology refers to the incarnation of the nail plate in the proximal nail fold. Till now around 40 cases have been reported. It exhibits a triad of clinical features, which are chronic paronychia, liquid discharge from under the nail fold and disruption of the linear nail growth. Authors present 4 new cases of this rare entity. Most commonly affected are – young adults with a female preponderance. Cause is trauma to the proximal nail fold (PNF) by the proximal edge of the nail plate most commonly due to faulty footwear. Great toes are most commonly involved. Differential diagnoses include chronic paronychia, subungual tumours and cysts. Yellow discoloration of nails is characteristic. 3D USG aids in early diagnosis. Empirical antibiotic/antifungal treatment is not useful. Nail plate avulsion is the diagnostic and curative procedure of choice. Subsequent nail growth is normal without dystrophia and no recurrences are observed. Knowledge of this pathology avoids misdiagnosis, unnecessary antibiotic or local treatments and allows adequate surgical management.

**Post-traumatic Ectopic Nail.**

**Hwang SM, Cho KH, Kim HD, Jung YH, Kim HI. Arch Plast Surg 2013; 40:793-4.**

Ectopic nail, also termed onychoheterotopia is rare entity where nail grows in places other than the nail bed due to an abnormal location or direction of the matrix. The congenital variety due to genetic aberrations is more common and the acquired one is mostly post-traumatic.

The authors present the case of a 8-year-old girl with a nail deformity in the left thumb. At the age of 2 years, the patient sustained a crushing injury. Afterwards, a nail-like keratotic lesion 7 mm×5 mm in size was evident, growing in the eponychium, remote from the normal nail. The clinical impression was **posttraumatic ectopic nail**. Excision was done under intravenous anesthesia taking care not to damage the matrix of the normal nail.

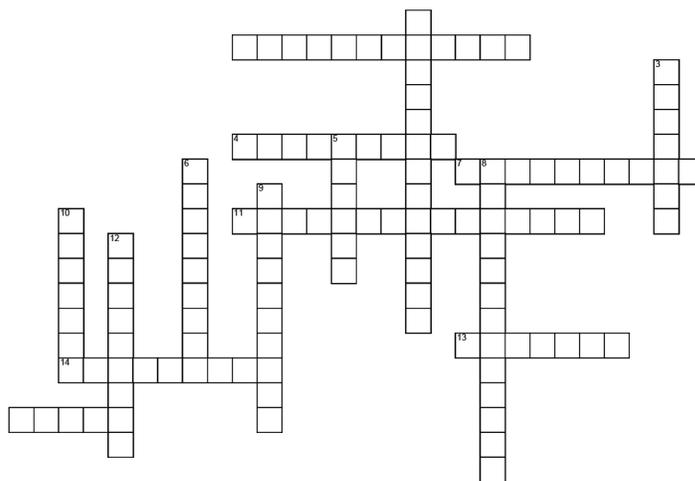
The characteristics for diagnosis are: **Clinical** –A small outgrowth of a deviant nail or complete double fingernail malformation. **Histopathological** – Similar to normal nail, but absence of nail bed. **Radiological** – May vary depending on the depth and location of its matrix. The **differential diagnosis** should include foreign body reactions, rudimentary polydactyly, teratoma, hamartoma, split nail deformity, cutaneous horn, polyonychia associated with syndactyly, epidermolysis bullosa, and congenital ectodermal dysplasia.

**Management:** The standard treatment regimen for ectopic nail is surgical excision. To prevent recurrence, the matrix of an ectopic nail should be removed.

Compiled by

**Dr Sidharth Sonthalia**

MD, DNB, MNAMS, FISD (Dermatosurgery)

**Nail Maze****Down**

- 1** Rough nail plate with excessive longitudinal striations
- 3** Most common sign of nail psoriasis
- 5** Highest NAPS I for only upper limb involvement
- 6** Term twenty nail dystrophy of childhood was coined by
- 8** Underlying cause of leukonychia in psoriatic nail
- 9** Biological with strongest evidence of efficacy for nail psoriasis
- 10** Most diagnostic sign of psoriasis of nail
- 12** Treatment of choice for pustular psoriasis of nail

**Across**

- 2** Topical antimetabolite used for treatment of nail psoriasis
- 4** Laser used for treatment of nail Psoriasis
- 7** Most common histopathologic feature associated with trachyonychia
- 11** Gross psoriatic involvement of the nail matrix leads to
- 13** Modified NAPS I was proposed by
- 14** Scarring between proximal nail fold and nail matrix
- 15** Method of evaluation of nail psoriasis

**Dr Rahul Arora**, Senior Resident, Department of Dermatology, UCMS and GTB Hospital, Delhi-110095

Please mail your answers to [nailsocietyofindia@gmail.com](mailto:nailsocietyofindia@gmail.com)

Names of the first three winners will be published in the next issue of the newsletter.

## Answer to Photo Quiz

**Diagnosis:** Acquired Periungual Fibrokeratoma

### DISCUSSION

Acquired periungual fibrokeratoma (APF), is a rare benign fibrous hyperkeratotic tumor of the periungual region. It is a variant of acquired digital fibrokeratoma. The term was first coined by Cahn in 1977. It arises from proximal margin of germinal matrix and presents as a solitary, firm, skin coloured, asymptomatic mass arising from beneath the proximal nail fold with a hyperkeratotic tip. Occasionally it may be pedunculated or warty. It is characterized histopathologically by hyperkeratosis, acanthosis, and broad, branching rete ridges. Core contains prominent interwoven vertically oriented collagen bundles. Treatment is complete excision. It can simulate other fibrous tumors of nail apparatus like Koenen's tumor and fibrous dermatofibroma. Other differentials include verruca, cutaneous horn, supernumery digits, keloids, neurofibromas and infantile digital fibromatosis.

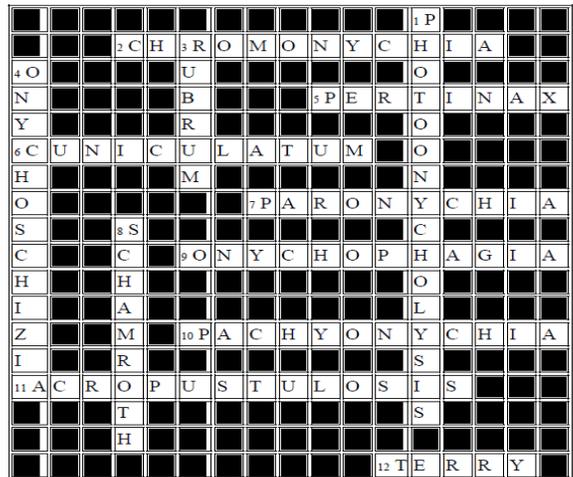
**Koenen's tumors** usually appear at or after puberty; are smooth, firm, flesh coloured excrescences emerging from nail folds; associated with other features of tuberous sclerosis. Histologically, these are characterized by fibrosis with stellate strands of fibroblasts; dense collagen; and ectatic vessels. **Fibrous dermatofibroma** is a smooth edged tumor in periungual area which usually does not elevate the posterior nail fold and tip is not hyperkeratotic. Histologically, fibrocollagenous deposit lack increased vascularity and rarely there is a histolytic infiltrate.

**Contributed by**  
**Dr. Ramandeep Kaur**  
Final year Post Graduate  
UCMS &GTBH



## Solution to Nail Maze from Onychoscope Vol 2 Issue 2 (Jun 2013)

Dr Shikha Bansal



### And the winners are!

- Nirmal B, Bengaluru
- Urmi Khanna, Delhi
- Kalpana Patel, Gurgaon



## Editorial Board Members



Dr Shikha Bansal



Dr Sidharth Sonthalia



Dr Chander Grover



Dr Archana Singal