# ONYCHOSCOPE

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Nail Society of India

**Official Newsletter of NSI** **Vol.6, Issue 1, Jan 2017**




Dear Friends!
Here comes the next issue of Onychoscope! And we are so glad that with this **10th issue**, we hereby **complete a continuous five year run of bringing out this newsletter.**
NSI nears five years of its nascent existence and with **the life member count being more than 250**, it sure has grown in strength from day to day. What started as a group effort of some of us has morphed into a strong movement instrumental in bringing nail disorders and their treatment into the mainstream of dermatology.

We are happy to report that despite difficult circumstances we could hold the 5th ONYCHOCON in December, 2017. The conference, originally scheduled for Srinagar had to be eventually shifted to Jaipur but this did not dampen the spirits of the original planners (Prof Iffat Hassan and her team) and in fact gained more momentum when the baton was passed on to the new hosts (Prof Dinesh Mathur and his team). We at NSI are immensely thankful to academically oriented, resourceful organizers and faculty for pulling off a major academic event. **This issue celebrates the success of ONYCHOCON-2016!** The Conference highlights are included in this issue. We also congratulate the prize winners in various categories!

The invited faculty for this issue is Dr Manas Ranjan Puhan who shares his experience on **conservative management of ingrown toenail**. I am sure his experience would be valuable to our readers. The issue also carries the regular columns of **Photo-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 Geeti Khullar would be found useful in your daily practice.
We are also featuring excerpts from the **Annual Meeting of the European Nail Society** penned down by Dr Archana Singal who participated as Invited Faculty in the same. A detailed report on ONYCHOCON has also been compiled by Drs Shikha Bansal and Soni Nanda and is included in this issue.

It also gives me great pleasure to announce that **the next ONYCHOCON will be organized in Amritsar** by Dr BB Mahajan, Dr Gambhir and their team. But before that The 4th ISND will be hosted by Dr Dimitris Rigopoulos at Athens, Greece in 2017.
We strongly look forward to this year's event showcasing the latest and the best in the field of nail research. It would also be a great opportunity to meet and interact with all our members.

NSI made a humble beginning in February, 2012 and was **formally registered as a National Society in September, 2012**. Working together has seen its progressive growth over the past five years and we hope to build the society further to achieve greater heights. A very Happy Fifth birthday to NSI.
Viva NSI!!

**Chander Grover**


# PLASTIC TUBE INSERTION TECHNIQUE FOR INGROWN NAILS: TIPS AND TRICKS

**Dr Manas Ranjan Puhan, MD**
Asst Prof, Hitech MCH, Bhubaneswar, Odisha India.

**Introduction:**

The ingrown nail is a common problem in the great toe though may affect any nail, also known as an onychocryptosis or unguis incarnates. Penetration is often caused by spicules of nail, separated from the main portion of the nail plate at the edge. This may result in pain, sepsis and, later, the formation of granulation tissue. More severe infection may follow leading to cellulitis. There is seldom any difficulty with diagnosis. Compression of the toe from the side due to ill-fitting footwear and cutting the toenails in a half circle instead of straight across are the main cause of the deformity. Other causes include long great toe, prominent lateral nail folds, pressure due to sports activities like kicking, hyperhidrosis, chronic paronychia etc. Many therapeutic methods have been described, but severe damage to the nail and frequent relapses are the major problems.

**Treatment options:**

Medical management is difficult and mostly prolonged. The basic steps include removal of the cause of ingrowing, if any. General measures like cutting the nail straight and allowing the nail plate to grow until its edges are clear of the end of the toe before it is cut. Warm water baths followed by careful drying and powdering are helpful. Potent topical steroid can be useful to diminish inflammation and suppress granulation tissue and antibiotics when secondary infection is suspected. If conservative measures fail, operative intervention will be necessary.

Complete nail avulsion, partial nail avulsion and wedge resection of the distal nail edge are likely to result in recurrence of ingrowing when the nail returns and so should be combined with a curative procedure such as phenolization or laser ablation of the relevant part of the matrix. Surgical excision of matrix can provide an excellent result but needs lots of expertise for that procedure. Plastic tube insertion technique or gutter splinting is an easy procedure preserving the original nail plate. This procedure needs very basic instruments and downtime is less. In our study 260 ingrown toenails were included and followed upto one year. Various modifications were added to this procedure to make it a gold standard treatment for ingrown nail.

**Plastic tube insertion technique:**

Instrument required are dental spatula, sterilized plastic tube (saline attachment or needle cover of venflon etc.), tourniquet, blade and insulin syringe. Distal digital block is given using 2% lidocaine. The syringe is inserted at a distance of one cm proximal and lateral to the meeting point of lateral and proximal nail fold on both the sides. Premedications include Hydroxyzine 25 mg the night before operation and 0.5 mg Lorazepam sublingually one hour prior to surgery.

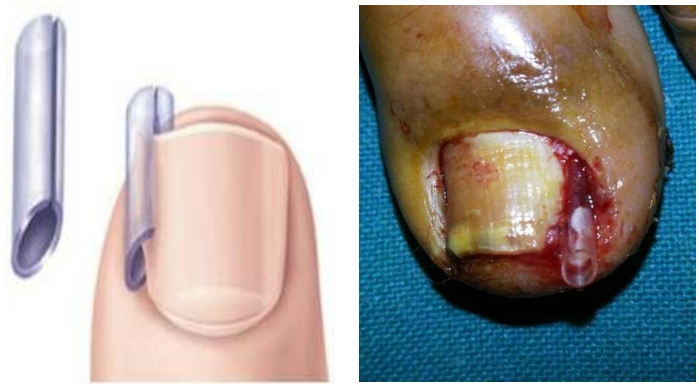


**Fig 1: Plastic tube insertion technique**

**Fig 2: Plastic tubes used**

Excess granulation tissue is to be removed and the nail plate is separated from the proximal nail fold and nail bed, about three mm at the lateral margin only. The tube is cut along the length and one end beveled by a blade. Then the tube is inserted just under the lateral nail edge upto proximal nail fold. Tube is cut at a distance of three mm from the soft tissue followed by a light bandage to be kept for one week. Sometimes the tube is fixed to the nail plate using a suture or feviquick. Post operative antibiotic and analgesics are given for five days. The dressing is removed on 7$^{th}$ day

and after thorough cleaning the tube is reinserted and kept for another week. By the end of second week a clear space forms between the lateral edge of nail plate and soft tissue which helps in further growing of nail beyond soft tissue. This gives a permanent cure for the ingrowing toe nail.

**Results of our study:**

Recurrence was seen in only 18/260(6.92%), nail dystrophy in two and cellulitis in one patient. On analyzing the data, recurrence was more in patients treated with flexible plastic tube (15/48) than a rigid plastic tube (3/212) and when the tube was cut at a distance of three mm from the soft tissue (11/100) than when cut just at the level of soft tissue (7/160). No recurrence was seen who kept the tube for one week after the bandage removal on 7th day. Out of total 18 recurrences 13 had H/O pyogenic granuloma at other body sites.

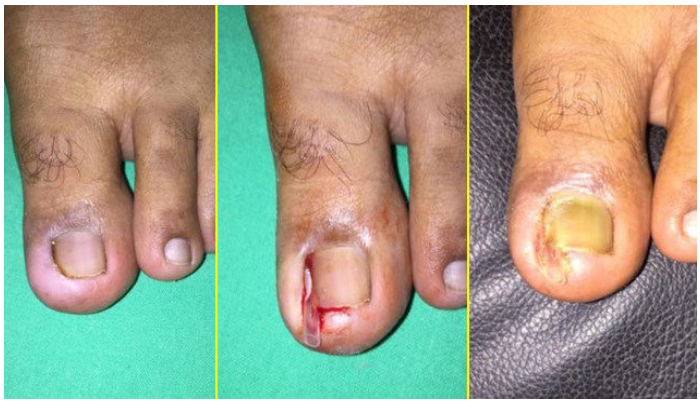


**Fig 3: Serial photos showing just after the insertion of tube and one week later**

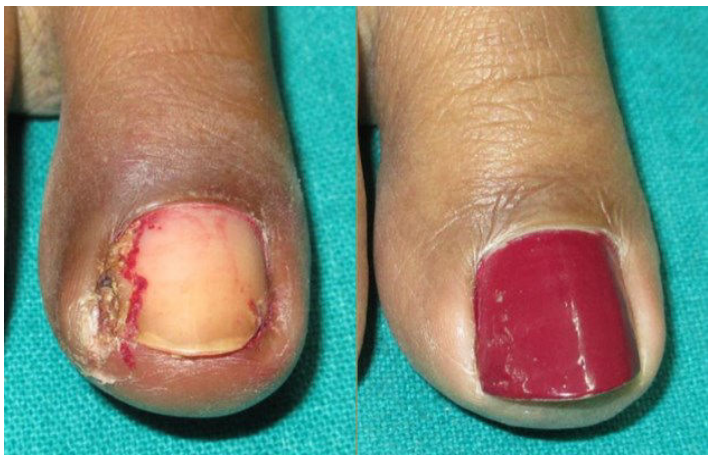


**Fig 4: Follow up at one year**

**Conclusion:**

Some modifications of this technique like using a rigid plastic tube, cutting the tube at a distance of three mm from soft tissue and keeping the tube for two weeks will reduce the recurrence rate to <1%. H/o pyogenic granuloma is a contraindication for this procedure.

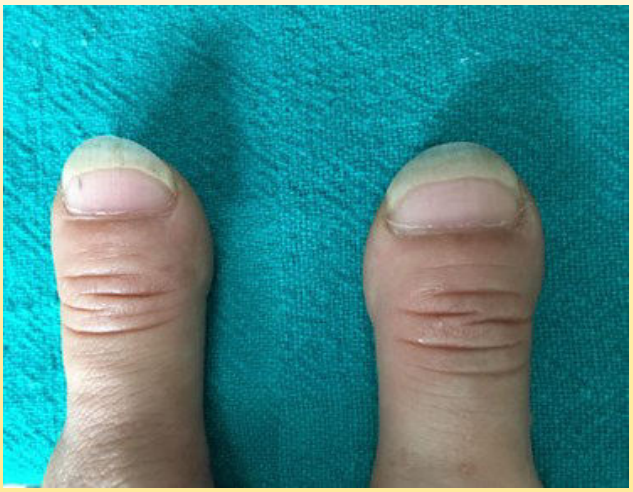
**Take home message:**

Considering the low recurrence rate and adverse events plastic tube insertion technique can be an effective, non-invasive first line treatment method for ingrown nails. As this procedure needs no sophisticated instruments and simple to perform at any hospital setting, it can be a gold standard for the treatment of ingrown nails.

## Photo Quiz

Q. A 10 year old girl presented with complaints of asymptomatic, abnormal shape of both the thumb nails since birth. On examination, both the thumb nails were short and broad with no surface changes. On palpation, there was no underlying bony defect. Rest of the finger and toenails were spared. All the other family members had normal nails. ray of the involved digits did not reveal any abnormality.

**Question**: What is the nail abnormality? And what are the syndromes associated with it?



Answer on Page - 8

## CONFERENCE REPORT

### European Nail Society (ENS) 2016 Annual Meeting, 28th Sept 2016

### During 25th EADV Congress, 28th Sept -2nd Oct 2016, Vienna (Austria)

The 25th European Academy of Dermatology and Venereology (EADV) congress was held at Vienna, Austria during 28th Sept to 2nd Oct, 2016. The conference saw participation of over 10,000 delegates from all across the world at swanky 'Austrian Center' on the banks of river Danube.

The Annual meeting of European Nail Society (ENS), session SS13, was conducted as a 4 hours long mara-

thon session, on 28 September, 2016, from 13.30 to 17.30 hrs in fully packed auditorium with a capacity of over 700 delegates. There were 11 speakers from different countries and continents covering medical, surgical and diagnostic aspects of nail disorders. The session began with the welcome address by the ENS President Dr Bianca Maria Parricini followed by E: Nail Medical and E: Nail Surgical. The E: Nail session was a novel and interesting concept for me where Dr Michela Starace (Bologna, Italy) and Dr Marie Caucanas (Toulouse, France) presented highlights of cases posted on the ENS website by the ENS members for the opinion of the experts. Brief history, clinical details, diagnosis given by various experts, suggested investigations and management were projected. A final diagnosis and the treatment outcome of each patient were given in the end and it made a great learning experience.


Dr Bianca made presentation on Onychoscopy update and how onychoscopy may obviate the need of biopsy in the suspected cases of melanonychia, onychomycosis and nail psoriasis. Dr Curtis Thompson (Portland, USA) elaborated on the importance of proper nail sample collection and transportation for histopathology, in a specially designed box that has marking for proximal and distal end of the nail biopsy or clipping. Dr Adam Rubin (Philadelphia, USA) emphasized on the nail histology and how it can lead to unveiling of distinctive histological diagnosis. Updates on inflammatory nail disorders, particularly Nail psoriasis and lichen planus was presented by Dr Dimitris Rigopoulos (Athens, Greece) and he quoted many Indian studies. Role of immunosuppressive therapies and absence of guidelines for the use of biologics for isolated nail psoriasis was discussed. Dr David de Berker (Bristol, UK) discussed HPV infection of nail, importance of HPV typing, differential diagnosis from SCC and Bowen's disease and the treatment options like ablative measures and intra lesional injections of bleomycin. I was invited to present tropical nail disorders that involved nails in infections namely Bacterial, fungal, viral and mycobacterial etc. I deliberated on how they are frequent and different from west and why it is important to be aware of these changes in the era of global migration. It generated lots of interest. Surgical management of the ingrown toenail was discussed with Dr Bertrand Richert (Brussels) who is also the Hon Secretary of ENS. Lastly, Dr Vincent Sibaud (France) made a very interesting presentation on adverse drug reaction pertaining to nails from newer antimitotic drugs like taxanes resulting in the formation of ingrown toenail, subungual hematoma, paronychia and subtle hyperpigmentation of nail plate. All the talks were followed by the audience queries and interaction.

Interacting with the international experts on nail and representing NSI was surely a very enriching experience and motivates to do more in the field of Nail.

**Archana Singal**

## CONFERENCE REPORT

### ONYCHOCON-2016 (Annual National Conference of Nail Society of India)

ONYCHOCON-2016 was organized on the 17th and 18th of December 2016 at Hotel Clarks Amer, Jaipur. It was organized under the able guidance and leadership of Prof Dinesh Mathur (Organizing Chairperson) and Dr. Manisha Nijhawan (Organizing Secretary). The Scientific committee was chaired by Prof R.A Bumb who had planned a truly academic feast by roping in experienced speakers on varied topics. The original planners (Prof Iffat Hassan and her team)-Organizing secretary Dr. Imran Majid, Scientific Secretary-Dr. Yasmeen Jabeen Bhat, Joint secretary-Dr.Shagufta Rather and Treasurer -Dr. Syed Mubashir enthusiastically helped in organizing the whole conference. It was heartening to see that the attendance and the level of interest of the delegates has been going up every passing

year. The 2 day long program went literally without any glitches This event was unique in more ways than one. There was good number of high quality e-posters available for delegates on both days.

**Day 1:** Workshop

A "Pre-Conference Workshop on Nail Surgery" (Video demonstration) was held as the opening session with Dr B.B Mahajan, Dr. Archana Singal Dr. Venkatesh Purohit and Dr. Chander Grover participating as Faculty. The workshop saw participation by young and enthusiastic learners. The keenness to ask questions, seek answers and give their own inputs was distinctly visible. The latest and state of art about nail surgery was discussed in form of lecture accompanied with video demonstration of the steps. The basics of nail surgery like anesthesia, proper tourniquet application, nail biopsy technique was demonstrated by Dr. B Mahajan. He told that local anesthesia with adrenaline is safe for digital blocks. Surgery for ingrown nail was demonstrated by Dr. Archana Singal. She demonstrated a simple technique of strapping by dynaplast for initial stages of ingrown toe nail. It was told that radiofrequency ablation of matrix for 3-5 seconds is an effective way to ablate the matrix. Plastic tube insertion technique for ingrown toe nail was video demonstrated by Dr. Venkatesh Purohit. Surgical management of nail tumors was video demonstrated by Dr. Chander Grover. The delegates actively participated and interacted with the experts.

It was an enriching experience for both audience and demonstrators. The well knit scientific program was the backbone of the conference. History of nails was discussed by Dr. Ram Gulati. Anatomy and physiology of nail were discussed in detail by Dr. Savita Agarwal. Dr. Shikha Bansal made delegates aware about various terminologies with regard to nail disorder and gave a brief overview to the approach to diagnosis of the same. Dr. Manoj Singh could not make it to the conference but participated with a video talk on the histopathological aspect of nail. He correlated clinical findings with histopathology e.g. presence of fibrosis is nail lichen planus correlates with the irreversible clinical changes like pterygium, anonychia. Dr Chander Grover discussed in vivo diagnosis of nail disorders with a talk on Onychoscopy. Dr.Vineet Relhan made audience aware regarding various clinical aspects of chronic paronychia, its medical and surgical management. Dr.Sanjeev Handa delivered an interesting talk on various scoring systems in use in various nail diseases. Dr; Vinay Shankar covered the topic of nail in genodermatosis and demonstrated many representative cases. This was followed by a very brief inaugural function wherein Dr.V.N Sehgal was the Chief Guest. The dignitaries lighted the ceremonial lamp and invoked the blessings of Goddess Saraswati, the Goddess of Learning. The next session was Clinical Onychology. Dr. Soni Nanda discussed nail changes due to drugs. Dr. Anil Ganjoo highlighted the role of micronutrients in nail disorders as there are so many market preparations which are available. The effect of heavy metals on nails was discussed by Dr. Puneet Agarwal.

The next session was Onychoscopy-Interesting scenarios. Dr.Yasmeen Jabeen Bhat presented onychoscopic findings of many common onychopathies. Onychosopy of nail psoriasis and other inflammatory conditions were extensively covered by Dr. Balachandra Ankad. Follwing this Dr. Surendra Thalore and Dr.Vijay Paliwal covered various aspects of nail changes in bullous and connective tissue disorder respectively. In a very entertaining session, Dr.Sanjay Kanodia presented many humorous anecdotes associated with nail and its diseases .This was followed by free paper session wherein papers were presented by avid nail researchers. The prelims of the quiz was conducted by Dr. Sanjay Kanodia and Dr. Atul Vijay. In the evening, the 4th Annual General Body Meeting of NSI was conducted where it was decided that the next conference would be held in Amritsar under the able guidance of Drs BB Mhajan and ML Gambhir. There was gala dinner in the evening wherein all faculty and delegates got a chance to interact with each other.

**Day 2:** The morning sessions started early with the much awaited Award paper session with Dr Rajeev Sharma and other eminent dermatologists as the judges .

Both Award and Free paper sessions witnessed enthusiastic and astounding research efforts by our young members who came up with innovative studies and fresh answers. This

was followed by a session on inflammatory nail diseases which was enriching with talks given by stalwarts. These

are common disorder and audiences were much benefitted from experiences of the speakers. Dr. Deepika Pandhi talked on nail manifestations of contact and occupational dermatoses of nails. Dr. Iffat Hassan made audience aware about very common condition-Nail psoriasis.

The subsequent session on infectious nail diseases incorporated commonly encountered nail disorders with excellent clinical photographs and enriching discussions by all speakers and panelists. Nail can be a window to the underlying systemic disorder. It can provide a valid clue to the physician .This was expertly covered by Dr. Archana Singal. Dr. R.D Mehta gave a talk on Nail changes in pediatric age group. Injectable therapy in nail diseases is a very important aspect in therapeutics of nail disorders. This was expertly covered with help of clinical photographs by Dr. Chander Grover. Miscellaneous topics discussed by experts were Melanonychia-a common clinical entity, nail tumors, traumatic nail disorder and Nail tic disorder. Important clinical aspects were covered. Nail aesthetics, cosmetics and advances is a growing field which is generating lot of interest. It has evolved into a fully fledged industry. Dr. Geraldine Jain gave her views and clinical experience on nail cosmetics and aesthetics.

Transungual drug delivery was detailed in a very informative session. Dermatologist driven nail aesthetic procedures


were ably covered by Dr. Soni Nanda. Dr Syed Mubashir covered the new happenings in the field of nail surgeries. . The Valedictory Function was eagerly awaited. All the prize winners were suitably rewarded. Prof Mathur and his team graciously acknowledged the support received from Pharmaceutical sponsors. The Conference concluded with wonderful memories and promises to meet up in the next ONYCHOCON to be hosted at Amritsar.

The 4th ISND will be hosted by Dr. Dimitris Rigopoulos at Athens, Greece in 2017.

**Compiled by: Dr. Shikha Bansal, Dr. Soni Nanda**

## Excerpts from Nail Literature

### NAIL: WHAT'S NEW?

**Longitudinal Erythronychia: Retrospective Single-Center Study Evaluating Differential Diagnosis and the Likelihood of Malignancy.**

**Jellinek NJ, Lipner SR. Dermatol Surg. 2016; 42:310-9.**

**Longitudinal erythronychia (LE), a linear red band on the nail plate**, represents an understudied clinical entity. It may be localized to one nail or multiple nails, with varying etiologies**. Neoplastic process is often associated in single nail involvement, while inflammatory/idiopathic causes may underlie polydactylous cases**. In a retrospective study evaluating 65 cases of LE histopathologically, onychopapilloma was the common diagnosis, contributing to 63% (41/65) of the cases. Lichenoid inflammation was seen in 8% (5/65) cases, glomus tumor in 6% (4/65), wart in 5% (3/65) and squamous cell carcinoma (SCC) in situ in 3% (2/65) cases. Invasive melanoma, subungual myxoid cyst, onychomatricoma, scar, superficial acral fibromyxoma, lentigo, atypical nevus, neurilemmoma, median canaliform dystrophy of Heller, lichen planus, *Fusarium* onychomycosis and lipoma were observed in 1 case each. Single nail involvement was noted in 61 cases and multiple nails in 4 cases. Overall, onychopapilloma was the most common diagnosis in single nail LE and lichen planus in polydactylous cases. Longitudinal biopsy is the preferred method of biopsy in case of a suspected onychopapilloma or SCC in situ.

**Comment: It is imperative to know that malignancy is uncommon but not rare in cases presenting with single nail LE [3 out of 65 cases (5%)]. SCC in situ is the most common malignancy**. In addition, the clinician should be aware of a broad spectrum of benign diagnoses that underlie LE. There are no clear-cut clinical features that can predict a malignant versus benign cause. Clinicopathologic correlation is essential to arrive at the diagnosis in most of the cases of LE.

**Nail involvement in systemic sclerosis.**

**Marie I, Gremain V, Nassermadji K, Richard L, Joly P, Menard JF, et al. .J Am Acad Dermatol. 2016 Dec 20 (Epub ahead of print).**

A prospective case-control study in 129 patients of systemic sclerosis (SSc) demonstrated nail changes

in104 (80.6%) cases. SSc was strongly associated with (1) trachyonychia, scleronychia, and thickened nails; (2) parrot beaking and brachyonychia; (3) hyponychium hyperkeratosis and pterygium inversum; (4) irregular, thickened, and enlarged cuticles; and (5) splinter haemorrhage**. This study suggests that examination of fingernails should be an essential component of the complete physical examination in SSc**. Also**, fingernail changes such as parrot beaking, pterygium inversum unguis, and cuticle abnormalities may be included in the American College of Rheumatology/ European League Against Rheumatism classification criteria for SSc.** This study showed that these fingernail abnormalities were present in early SSc. The presence of fingernail changes was associated with digital ulcers, calcinosis cutis, severe findings on nailfold videocapillaroscopy and severe esophageal motor disturbances.

**Comment**: **Fingernail changes are common in SSc and correlate with more severe forms of the disease characterized by digital vasculopathy**. Nail changes should therefore be systematically checked in all patients with SSc.

**Onychomycosis in patients with nail psoriasis: a point to point discussion.**

**Rigopoulos D, Papanagiotou V, Daniel R III, Piraccini BM. Mycoses. 2017;60:6-10.**

Onychomycosis and nail psoriasis are very common and share many similar clinical signs. It has been suggested that onychomycosis is more frequent in patients with nail psoriasis, but the results of the studies are controversial. The lack of compact orthokeratotic nail plate and detachment of nail plate from the nail bed creating a moist subungual space, predispose the psoriatic nails to fungal infection. On the other hand, rapid turnover of the distal nail plate and the upregulation of antimicrobial peptides like psoriasin protects psoriatic nails against fungal infection. In a systematic review of 10 studies, it was found that the prevalence of onychomycosis in psoriatic patients is 18%, while it is 9.1% in the normal population. It has also been proposed that onychomycosis may worsen or trigger nail psoriasis by means of koebnerization. This is supported by the fact that nail psoriasis severity index score of patients with nail psoriasis and onychomycosis has been shown to be higher compared to patients with nail psoriasis but without onychomycosis. Regarding treatment, local application of topical steroids on the nails can facilitate fungal infection. Use of systemic immunosuppressants like cyclosporine and methotrexate in psoriasis can also predispose to onychomycosis. A significant association has been shown between onychomycosis and patients with nail psoriasis receiving anti-TNF therapy, especially infliximab.

**Comment**: This article highlights the close affinity between nail psoriasis and onychomycosis. However, it is still debatable if nail psoriasis predisposes to onychomycosis or vice-versa or if the presence of the two conditions is just incidental. Nail psoriasis refractory to treatment or with clinical signs of onychomycosis should be investigated using direct microscopy and fungal culture. If both diseases co-exist, the aim should be to first complete the course of systemic antifungal followed by definite anti-psoriatic treatment, topical or systemic.

**Compiled by:**
**Dr. Geeti Khullar, Specialist,**
**VMMC & Safdarjung Hospital, New Delhi.**

## AWARD WINNERS ONYCHOCON - 2016

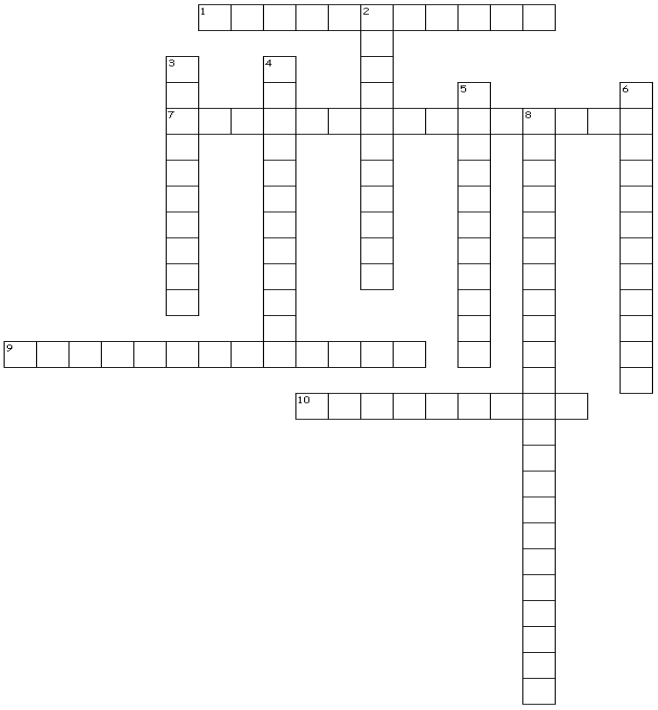
**Award Papers**
1. Dr. Vandana Kataria, Dr. Shivi Nijhawan
2. Dr. Deepak Jakhar
3. Dr. Faizan Yunus Shah, Dr. Gauri Vats

**Free Papers**
1. Dr. Durgesh Sonare
2. Dr. Nidhi Paliwal
3. Dr. Anand Sharma, Dr. Elangbam Nelson Singh

**Posters**
1. Dr. Sakshi Singla
2. Dr. Chaitanya Singh
3. Dr. Peerzada Ashraf

**PG Quiz**
1. Dr. Deepak Jakhar, Dr. Geetali Khargoria, UCMS, Delhi
2. Dr. Vandana Kataria, Dr. Ishmeet Kaur UCMS, Delhi

## NAIL MAZE



Across
1. EMBEDDING OF NAILFOLD WITH SUBSEQUENT INFLAMMATION IS CALLED
7. RED LONGITUDINAL STREAK (ERTHRONYCHA) IS SEEN
9. AZURE LUNULA IS SEEN IN
10. ONYCHOCHAUXIS (THICK NAIL) IS SEEN

Down
2. TRIANGULAR LUNULA IS SEEN IN
3. TREATMENT WITH PODOPHYLLIN
4. ANGELWING DEFORMITY IS SEEN
5. BLUE NAIL IS SEEN IN
6. WEDGE SHAPED NAIL DYSTROPHY IS SEEN IN
8. MULTIPLE BROWN STREAKS ARE CHARECTERISTIC OF

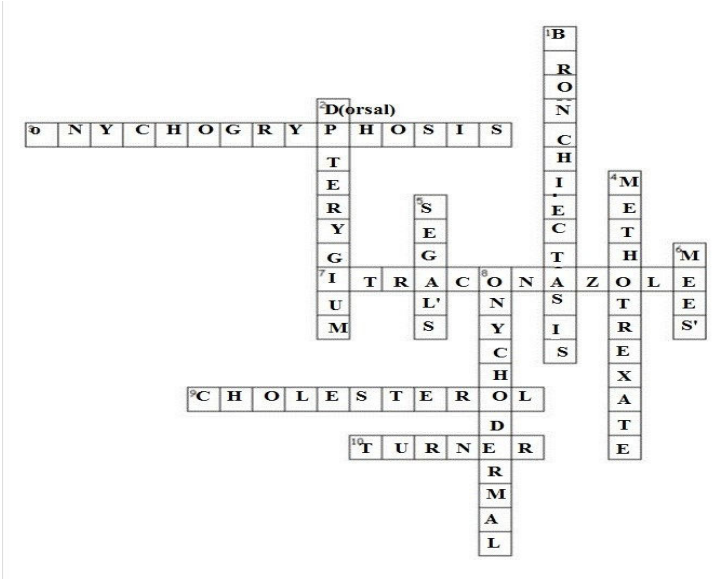
***Compiled by***
**Dr. Shikha Chugh**

**Please mail your answers to nailsocietyofindia@gmail.com. Prize winners will be announced in the next issue of Onychoscope.**

## WINNERS OF NAIL MAZE (VOL. 6, ISSUE 2, JULY 2016)

- **Dr. Gurvinder Banga**
- **Tanvi gupta**
- **Dr Kenit Ardeshna**

## Solution to the Nail Maze from Onychoscope Vol. 6, Issue 2, July 2016




## Answer to Photo Quiz

**Diagnosis: Brachyonychia**

The nail abnormality is **brachyonychia** (synonyms- racquet nails, short nails), defined as a condition where the width of the nail plate (and the nail bed) is greater than the length. It can be congenital or acquired. Congenital type falls into three different patterns: Type 1 – it is the most common type where one or both thumbs are involved, Type 2 – all the nails are affected and there is an underlying bony abnormality, Type 3 – there is no bony abnormality and the thumb is spared.

It is usually inherited as an autosomal dominant trait where there is an early obliteration of the epiphysis of the underlying terminal phalynx. Bony abnormalities that can be seen include shortened phalynx, lytic changes or resorption of the terminal phalynx.

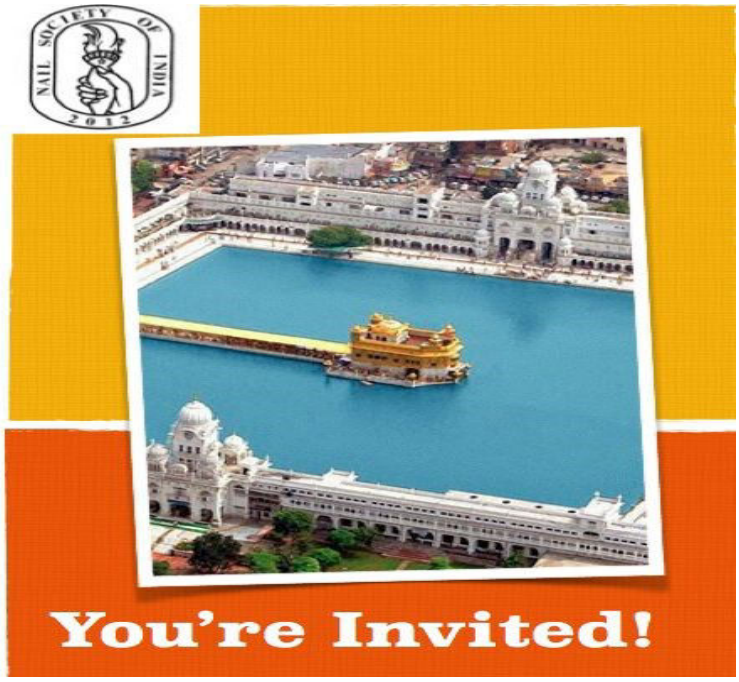
A clinician should be aware of this entity as it has been seen as an association with various conditions like

- Rubinstein Taybi syndrome –short stature, strabismus, vertebral, dental and cardiac anomalies, tumors like meningioma and neuroblastoma.
- Cartilage-hair hypoplasia– short stature, sparse hair, metastatic chondrodysplasia and susceptibility to viral infections.
- Acroosteolysis – gradual resorption of terminal phalynx, cardiac dysfunction and peripheral neuropathy.

Hence, the patient should be worked up accordingly.

**Dr. Ishmeet Kaur**
**Post Graduate –3rd year,**
**UCMS & GTB Hospital, Delhi.**




## Editorial Board Members

Dr Archana Singhal

Dr Chander Grover

Dr Shikha Bansal