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We wish all our readers a very Happy New Year-2019 through this 14th issue of Onychoscope. By now, we have a dedicated readership of Onychoscope and a committed member team of the Nail Society of India, who are serving and fostering the growth of nail research and knowledge through their efforts. We salute all of them, for their positive contribution and dedication towards the cause. With the society now entering its eighth year, we have been able to bring Onychology into mainstream dermatology; with dermatologists being recognized as the true onychologists.

The editorial team has compiled news and views over the past 6 months to bring to you this issue. **What's new in Nail literature** has been compiled by **Dr Kavita Bisherwal**. Through this column we offer regular updates on the latest advances in the field of nail diseases. We hope that our readers will find it useful.

Dr Ishmeet Kaur has compiled the conference report for two important landmark events. The first one was the **7th ONYCHOCON** - our Annual National Conference organized this year at Puri, Odisha. The dedicated and hardworking team of Dr Prasenjeet Mohanty (Organizing Chairperson), Dr Jayashree Mohanty (Scientific Chair), Dr Manas Ranjan Puhan (the very dynamic organizing Secretary) and Dr Bharti Sahu very efficiently organized this landmark event which has raised the bar for upcoming conferences. The onychoscopy and nail surgery workshops were unanimously appreciated as very useful by the participants. The quiz program and award paper sessions were big hits with the residents. The results are also being announced in this issue. The second prominent event was Aesthetics-2019, an annual conference of dermatologists and plastic surgeons, which dedicated a workshop and prominent sessions to the field of Onychology for the very first time.

Our **nail maze** section has prizes on offer and we hope that it will tickle your grey cells into action. **Dr Vishal Gaurav** has compiled the difficult and the not so difficult questions this time. **Dr Shikha Bansal** presents the photo-quiz. We hope you would enjoy it. We welcome your comments and constructive suggestions on nailsocietyofindia@gmail.com or on our facebook page. We encourage your active participation by joining the family of NSI which is 300+ members strong now.

The **8th ONYCHOCON** will be hosted at Mumbai by Dr Sushil Tahiliani and his team. The preparations are on in full swing. It promises to be great academic feast with confirmed participation of eminent faculty and researchers in the field of nail diseases. We look forward to meeting you all in November 2019.

Viva NSI!!

Chander Grover



Surgical Management of Subungual Glomus Tumors: Lessons Learnt



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Glomus tumor is a prominent painful tumor, which is not so uncommon in the digits (correlated to the high density of glomus bodies); especially in the subungual region. Generally, glomus tumors present with a triad of pain, tenderness, and temperature sensitivity. The problem is that an absence of signs impedes the diagnosis for a long time. Although, the clinical presentation is fairly suggestive, it is common to see patients remaining undiagnosed for long periods of times, even running into years. I am sharing a few lessons which I have learnt through experience over the years.

Lesson 1: Suspect and rule out a subungual glomus tumor, even if the patients nail appears otherwise normal.



Fig 1a: An apparently normal but very painful nail.



Fig 1b: Patient can clearly demarcate the area of the pain on his own.

Being a painful tumor, it significantly compromises the quality of life of its sufferer. The treatment for glomus tumor is surgical excision, and dermatosurgeons need to be conversant with the surgical techniques used. A proper technique is important for preventing postoperative nail deformities and tumor recurrence. Depending on the location (deduced on the basis of clinical examination and imaging), the best surgical approach should be planned to provide good visualization and prevent nail deformity at the same time. Clinically, Love's pin test can help localize the involved area and most of the patients are able to do this if counseled properly (Fig 1a,b). Radiological investigation of choice is MRI which can pick up even very small lesions and additionally expose sister lesions which may not be very symptomatic (Fig 2a,b).

Lesson 2: Try to locate the tumor before you plan surgical excision.

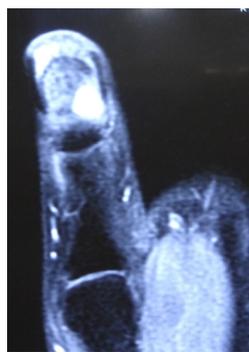


Fig 2a: A large, laterally placed nail matrix glomus.

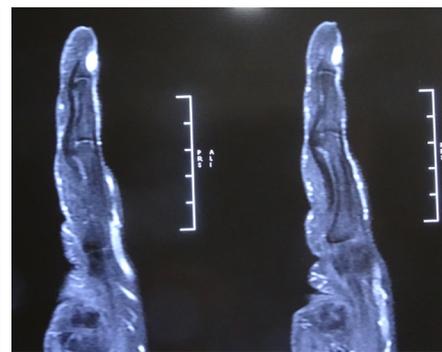


Fig 2b: Lateral view showing a linear nail bed glomus.

Articles have highlighted various surgical approaches, however, the **transungual approach** (requiring removal of overlying nail plate) is the most commonly used and effective method. I have found it to be very effective, especially if the nail avulsion is kept partial (lateral partial or proximal partial- depending on requirement). Although, recurrences after using transungual approach have been reported, a preoperative imaging (preferably MRI) helps prevent this possibility by showing the extent of the tumor beforehand. The lateral subungual approach aims at preserving the nail unit but is technically more difficult. It is difficult to reach the more centrally located glomus tumors.

Lesson 3: Plan your approach - dissect the tumor in your mind before you actually dissect the tumor.



Fig 3a-e: A distally placed nail bed glomus excised after lifting up the nail plate (like a car bonnet) and repositioning it back.

Appropriate sized nail surgical instruments help in lifting up nail plate a-traumatically as well as causing minimal lateral damage to the nail matrix or the nail bed. It is important to have various sized nail splitters and spatulas in your instrument tray. In addition Jeweller's forceps with sharp and bent tips and fine curved scissors help

precisely handle the tissue with minimal lateral damage. This is especially important for the nail matrix epithelium as nail matrix is the commonest location of the tumor. Avoiding large instruments prevent crush damage and devascularization of nail bed, minimizing chances of scar formation or split nail deformity. Huang et al, have also highlighted the advantage of a microscope-assisted technique in improving post operative outcomes.

Lesson 4: Stick to blunt dissection in the nail bed, and especially in the nail matrix.



Fig 4a-c: Blunt dissection after lateral partial nail avulsion slowly exposes the lesion.

Glomus is a well encapsulated tumor; thus, to prevent tumor recurrence, it is important to clearly visualize the cleavage zone when dissecting. It may take a few minutes to completely outline the extent of the tumor. You may even need to avulse more nail than you originally planned. But do take out the tumor in-toto. Sharp dissection may transect the tumor, leaving behind remnants responsible for recurrence of pain.

Lesson 5: Patience pays when you are separating the tumor out.

After having excised the tumor, the resultant defect may be left unsutured, if it is small. At least, an approximation of the wound edges should be ensured. For larger defects, repair is done using 6-0 fast-absorbing suture. Although the nail plate has been removed (hopefully partially!), repositioning the nail plate in-situ provides the best biological dressing for the exposed nail bed. The nail plate should be trimmed from edges (to prevent subungual seroma formation) and replaced over the exposed nail bed. It may be secured in position if required with 2-0 non-absorbable suture, removed after a week. Generally, the repositioned nail plate falls off after a week or two; it still aids a faster regeneration of the nail bed epithelium. It also prevents formation of adhesion between the proximal nail fold and bed/matrix thus preventing split nail or pterygium.

Lesson 6: Give back what you took!



Fig 5a-c: Large defect left behind by the tumor is sutured and the nail plate is repositioned.

For the transungual excisions of glomus which I have done (more than 50 over more than 10 years), digital nerve block is sufficient for pain relief during surgery. Digital exsanguinations and tourniquet should always be used to ensure a bloodless operative field. If locating and dissecting the tumor is taking time (>10-15 mins), the tourniquet can be released and retied. This prevents chances of digital ischemia due to prolonged tourniquet.

Lesson 7: Basics of nail surgery should be clear before operating on a glomus.

Post operative outcomes depend entirely on the pre-operative workup and per-operative technique. Hence, none of these should be taken lightly. With proper planning and resources, the chances of scarring, disfigurement, incomplete resection, or reappearance of symptoms can be largely prevented.

PHOTO QUIZ

50 year old female patient, presented with asymptomatic raised lesion over right great toe (Figure a) that developed over a period of 7 years. Deformity was asymptomatic apart from causing discomfort in closed footwear and slight pain on pressure. She got it excised from a local practitioner twice with recurrence.

On examination, there was presence of single nodule, size 1 x 1 cm present over nail bed of right great toe. The surface was skin colored. The adjoining nail plate was replaced by the lesion. Rest of the finger and toenails were found to be normal.

Surgical management was done. The tumor was excised (Figure b) and sent for histopathological examination. The section showed hyperkeratosis, acanthosis of epidermis with focal spongiosis. Papillary and upper dermis showed capillary proliferation with scattered stellate and spindle fibroblasts. Dermis showed thick collagen bundles arranged in whorls. Scattered stellate cells, fibroblasts were seen with occasional mast cells. Mild perivascular chronic inflammation was present throughout the dermis. No atypical cells or necrosis was seen (Figure c). Masson's Trichrome Stain revealed green collagen bundles (Figure d).

Q.1: What is your diagnosis (Figure a)?

Q.2: What are the common differential causes of this condition?

Q.3: What is the management?



Fig a



Fig b

Figure c, Figure d and Answers on Page - 10

CONFERENCE REPORTS

7th ONYCHOCON 2018 "Nailing the Nail: Unraveling the Hidden" Puri, Odisha on 1st-2nd December, 2018

The conference started on a beautiful note and a warm welcome by Dr. Archana Singal, Dr. Chander Grover and Dr. Manas Puhan for the delegates and faculty. The opening session was **Onychoscopy Workshop** which was a live demonstration of onychoscopy techniques and findings in normal and diseased nails. Dr Archana Singal detailed the **basic principles of onychoscopy** and Dr Chander Grover outlined the **salient features** seen. This was followed by a **panel discussion** moderated by **Dr Chander Grover**. Eminent panelists included **Dr Archana Singal, Dr Deepak Jakhar and Dr Monali Pattnaik** who practically discussed and demonstrated how to do and when to do onychoscopy. The salient diagnostic features were shown. The utility of onychoscopy in papulo-squamous, inflammatory, pigmentary and infective nail disorders was discussed. Various onychoscopic features observed in such diseases and how these can have diagnostic and prognostic significance was beautifully demonstrated during the workshop.

The workshop was followed by an interesting session on **Onychomycosis** where in **Dr. CS Sirka** talked about clinical clues to onychomycosis. Utility of LASER as a good alternative in management of onychomycosis was dealt by **Dr. Avitus John**. He discussed about various clinical scenarios where LASER can be used as a therapeutic option. Later, **Dr. Saumya Panda** briefly discussed about the current situation of onychomycosis in India.

In the potpourri sessions, **Dr. R.N. Dutta** enlightened the delegates about the importance and functions of nail unit. How a dermatologist should approach nail disorders was discussed by **Dr. Rajesh Kumar**. He elaborated various nail changes like melanonychia, koilonychia, leuconychia which can be related to systemic diseases. **Dr. Nibedita Patro** discussed about drug induced nail



changes which can cause cosmetic problems to the patient. The subject of brittle nails was taken up **Dr. Chander Grover** where she emphasized upon the causes, approach and management of the same.

Next session was focused upon nail changes seen in various systemic diseases. Nail changes in vesico-bullous disorders were dealt by **Dr. Dipankar De. Dr. Manjulata Dash** dealt with nail changes observed in papulosquamous diseases. Following this, an enlightening panel discussion was moderated by **Dr. Tapaswini Tripathy** with valuable inputs by **Dr. Sudhir Nayak** and **Dr. Sanjeev Gulati**.

An exhaustive session on **nail changes in pediatric and geriatric age group** was started by **Dr. Bhumesh Kumar Katakam**. He talked about the various nail changes in children and how they can give a clue to congenital and systemic disorders. The nail changes in the older age group were detailed by **Dr. Surabhi Dayal** where she emphasized upon nail care in elderly. **Dr. Anupam**

Das then discussed in detail about diagnosis and management of painful nail unit tumors such as glomus tumor, squamous cell carcinoma and subungual keratoacanthoma.

The last session of the day dealt in detail with various diagnostic tools in nail disorders. The diagnostic utility of nail fold capillaroscopy was elaborated by **Dr. Deepak Jakhar**



where he also explained various abnormal features encountered in connective tissue diseases such as systemic sclerosis. The role of histopathology in confirming the diagnosis of nail disorders was stressed upon by **Dr. Biwanath Behera**, **Dr. Adykinkar Panda** highlighted the role of non-invasive technique such as USG and MRI to diagnose various nail disorders specially nail unit tumors.

This was followed by the much awaited **Quiz Finals** where four teams were grilled by the Quiz Master **Dr Brijesh Nair**. It was a nail-biting event which kept the audience on the edge of their seats. The winners were **SCB Medical College, Cuttack**. The award paper session concluded the first day of the conference.

Day 2 also started with a video based **Nail Surgery Workshop**. Beautiful video presentation of various surgical techniques such as surgical nail avulsion, biopsy techniques and techniques of anesthesia of nail unit, intramatrix injection were demonstrated.

This was followed by a comprehensive session on nail therapeutics. **Dr. Bikash Ranjan Kar** briefly discussed about the role of Adalimumab as a safe and effective therapeutic modality in nail psoriasis. Dr. Madura C. dealt with the management in periungual wart and it's challenges. Dr. Chander Grover dwelled upon the various intralesional agents utilized in nail disorders and also discussed the intralesional injection techniques. Dr. Madhuchanda Mohapatra then conducted an enlightening panel discussion with impressive inputs by **Dr. M. Srichandan** and **Dr. Pankaj Tiwari**.

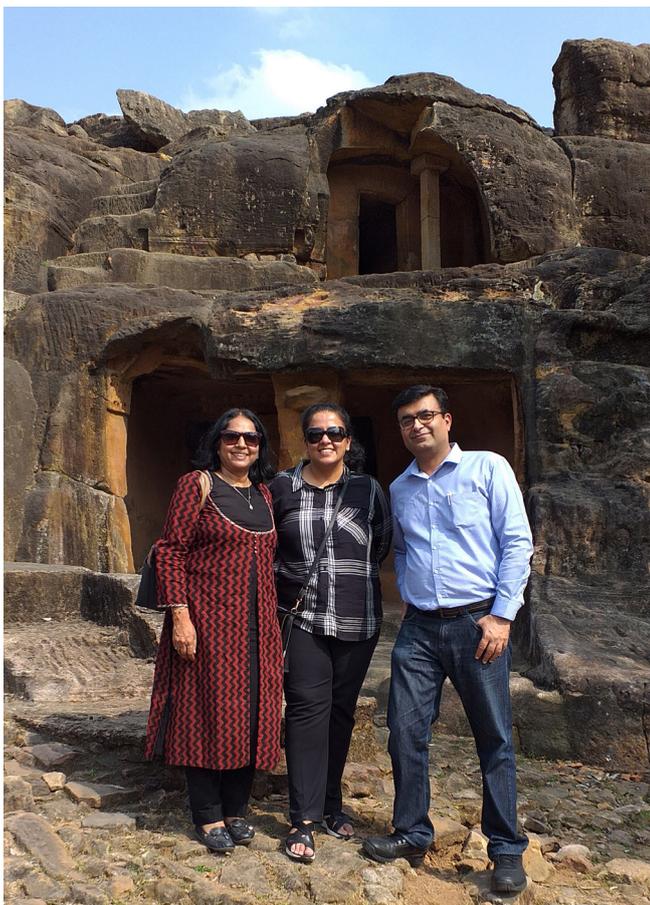


Next we had an illuminating session on nail surgery. **Dr Vineet Relhan** demonstrated the efficacy of various medical and recent surgical therapeutic modalities in the management of chronic paronychia. Surgical management of ingrown nail by partial nail avulsion and matrixectomy using phenol, TCA and Radiofrequency was discussed by **Dr Archana Singal**. **Dr. Gurvinder Banga** beautifully demonstrated cosmetic procedures and camouflage in various nail disorders.

Later, an interesting collection of challenging cases was presented by **Dr Archana Singal**. **Dr. Bhabhani Singh** highlighted various nail changes induced by various chemotherapeutic agents. Nail changes in various psychocutaneous and nail tic disorders was discussed by **Dr. Maitryee Panda**. Role of micronutrients and supplements in nail disorders was dwelled upon by **Dr. Binyak Dwari**. **Dr G. Anandan** briefly outlined various nail changes seen in leprosy. In the end, new updates about nail unit malignancy were dwelled upon by **Dr R.D. Mehta**. **Dr. Monaj Ram** discussed many interesting points about forensic onychology.

The academic fiesta saw enthusiastic participation by the many residents who competed in the **Award Paper and the Nail Quiz categories**. There was active participation and encouraging discussions by the young and enthusiastic learners in all the session and workshops. The hall was packed to its full capacity on both days of the conference. The conference successfully catered to the growing interest of dermatology delegates in the area of Nail.

Dr Ishmeet Kaur
Senior Resident, ESI PGIMER, Delhi



AESTHETICS 2018 Delhi on 9th-11th August, 2018

Aesthetics is a grand annual event with the theme “**Learning from each other**”. The Conference provides **an interface between Dermatologists and Plastic Surgeons** for enhancing the aesthetic practice of both specialities. This year, **Nail Disorders and procedures were kept as centre stage, reflecting the growing realization of the importance attached to this skin appendage.** **Dr Chander Grover** was invited as Session planner and Course Coordinator for exclusive **Nail Aesthetic and Surgical Onychology workshop** as well as session during Conference proceedings. The sessions saw participation from the very experienced international resource faculty - **Dr Eckart Haneke**, Germany and **Dr Avner Shemer**, Israel.

DAY 1 (17th August): This witnessed an exclusive “**Nail Aesthetics and Surgical Onychology Workshop**” which was very well attended.

Aesthetic Onychology

Dr. Shikha Bansal discussed the necessity for aesthetics in onychology and how the cosmetic appearance of the nail can affect the quality of life of the patient. The subject of Brittle nails was taken up **Dr. Chander Grover** where she emphasized upon the causes, approach and management of the same. Nail changes in the older age group were detailed by **Dr. Richa Chaudhary** where she emphasized upon care of ageing nails. Nail tic disorders are often associated with various psychiatric illnesses and can have a negative impact on life. **Dr. Archana Singal** dwelled upon this area and discussed various nail tic disorders and their management. **Dr Soni Nanda** beautifully demonstrated cosmetic procedures and camouflage in various nail disorders including chemical peels, gel nails and extension. **Dr. Shikha Bansal** then conducted an enlightening panel discussion with impressive inputs by **Dr. Archana Singal, Dr. Chander Grover, Dr. Richa Chaudhary** and **Dr. Soni Nanda** on various nail disorders.



Nail Surgery

Next we had illuminative video demonstrations on nail surgery. Starting with basics, **Dr. Deepak Jakhar** described various methods of administration of anesthesia of nail unit and the covered the basics of nail surgery. Various intralesional agents utilized in nail disorders including intra matricial and nail bed injections of steroids and methotrexate were discussed by **Dr. Chander Grover** along with the technique of intralesional injection. **Dr. Avner Shemer** discussed about the utility of energy based devices especially LASERS in nail disorders such as nail tumors and onychomycosis. **Dr. Eckart Heneke** dwelled upon the management of various benign and malignant nail tumors including glomus tumor, keratoacanthoma, melanoma and squamous cell carcinoma. **Dr Vineet Relhan** demonstrated the efficacy of various medical and recent surgical therapeutic modalities in the management of chronic paronychia. In the end, **Dr Soni Nanda** conducted a detailed panel discussion on challenges faced in nail surgery with valuable inputs from **Dr. Eckart Heneke, Dr. Chander Grover, Dr. Avner Shemer, Dr Vineet Relhan** and **Dr. Deepak Jakhar**.

DAY 2 (18th August): The opening session of the Conference was based on discussing approach to common nail disorders. The session began with a detailed discussion on causes and management of trachyonychia by **Dr. Shikha Bansal**. **Dr. Soni Nanda** then enlightened the delegates about various superficial Nail abnormalities and the role of chemical peels and gel nail in the management. This was followed by a detailed discussion by **Dr. Vineet Relhan** on various challenges faced in managing chronic paronychia. Management of onychomycosis was detailed





by **Dr. Avner Shemer** where he also stressed upon the role of LASERs and energy based devices. Medical and surgical management of ingrown nail including partial nail avulsion and matricectomy using phenol, TCA and Radiofrequency was discussed by **Dr. Eckart Heneke**. **Dr. Archana Singal** dealt with the challenges and management of periungual wart. She emphasized on the safety and efficacy of intralesional bleomycin in the treatment.

Dr. Chander Grover then discussed in detail about approach to benign as well as malignant nail tumors. She dwelled upon the importance of non-invasive investigations such as USG and MRI in the management. The second day concluded with an exhaustive panel discussion where **Dr. Deepak Jakhar** conducted the session on problem based approach to nail disorders such as trachyonychia, habit tic deformity, nail lichen straitus and onychoheterotopia with valuable inputs from **Dr. Eckart Heneke, Dr. Archana Singal, Dr. Chander Grover, Dr. Avner Shemer, Dr. Soni Nanda, Dr. Shikha Bansal** and **Dr Richa Chaudhary**.

The academic fiesta saw enthusiastic participation by the many residents who indulged in encouraging discussions in all the session and workshops. The hall was packed to its full capacity on both days of the conference. The conference successfully catered to the growing interest of dermatology delegates in the area of Nail.

**Dr Ishmeet Kaur, Senior Resident,
Dermatology and STD, ESI PGIMER, Delhi**

EXCERPTS FROM NAIL LITERATURE

NAIL: WHAT'S NEW?

Intramatricial injections for nail psoriasis: An open-label comparative study of triamcinolone, methotrexate, and cyclosporine.

Mittal J, Mahajan BB. Indian J Dermatol Venereol Leprol. 2018;84:419-23.

Intramatricial injection of triamcinolone acetonide is one the most effective options available for treating psoriatic fingernails. In this study, the authors comparatively

evaluated the efficacies of intramatricial triamcinolone, methotrexate and cyclosporine in nail psoriasis. Ninety fingernails in 17 patients were assigned to three groups of thirty nails each, and treated with intramatricial injections of triamcinolone acetonide (10 mg/ml), methotrexate (25 mg/ml) and cyclosporine (50 mg/ml) respectively. Each nail was given two injections with a 6-week interval, and graded at 24 weeks using the Nail Psoriasis Severity Index. They found that in both triamcinolone acetonide and methotrexate groups, 15 (50%) nails out of 30 showed >75% improvement. In the cyclosporine group, only ten (33%) nails showed >75% improvement. Side effects were most in the nails treated with cyclosporine.

Comments: Nail psoriasis is a common disorder and its treatment still remains a therapeutic challenge for the clinicians. Intramatricial injections are relatively safe, simple, cheap and effective therapeutic modality. Intramatricial steroid injections with triamcinolone acetonide are commonly being used. The authors found no significant difference in efficacies of intramatricial methotrexate, cyclosporine and triamcinolone. However, the best results along with lowest frequency of side effects were noticed with intramatricial methotrexate which were comparable to triamcinolone while cyclosporine was found to be the least effective drug, with maximum side effects. More RCTs with longer follow up are required for further corroboration and confirmation of results.

Case Study of Onychomycosis Patients Treated with 1,064-nm Nd:YAG Laser.

do Espírito Santo RB, Deps PD. Case Rep Dermatol. 2018;10(2):216-225.

Onychomycosis is the most frequent nail disease, with an estimated prevalence of 2-8%. The current treatment strategies include use of oral and topical antifungals, despite low cure rates. The objectives of this study were to assess the therapeutic response of patients with onychomycosis to 1,064-nm Nd:YAG laser treatment, the clinical evaluation method available for this therapy, and the possible side effects of this treatment. Twenty patients with onychomycosis underwent laser therapy. A total of 34 nails with onychomycosis were assessed according to the Onychomycosis Severity Index (OSI). This index generates scores that classify onychomycosis as mild, moderate, or severe. The OSI was determined before treatment and after a mean follow-up period of 8 months.

Comments: Lasers are an emerging therapeutic modality in the management of onychomycosis. Though, the therapeutic response was found to be unsatisfactory, the authors noticed reduction in the area of nail involvement and OSI scores with 1,064-nm Nd:YAG laser. The side effects seen locally were tolerable. Further studies are warranted for definite conclusion about the therapeutic response as well as to define specific laser parameters in the management of onychomycosis.

Onychopapillomas: A 68-case series to determine best surgical procedure and histologic sectioning. Delvaux C, Richert B, Lecerf P, André J. J Eur Acad Dermatol Venereol. 2018;32(11):2025-2030.

Onychopapilloma (OP) is a benign longitudinal nail bed tumour usually presenting as longitudinal erythronychia. Evidence-based recommendations for proper histologic sectioning and definitive surgical management are not available. The aims of this study were to review the clinical and histopathological features of all diagnosed OP, to identify the most accurate histological technique and to determine the most effective surgical procedures by examining recurrence rates and complications over the long term. The authors retrospectively analysed all patients with OP in their department between January 2007 and March 2017. Clinical findings and type of surgery performed were recorded from medical files and iconographic documents. All slides were reviewed by a dermatopathologist with expertise in nail disease. Longitudinal follow-up was performed. They found a total of 68 patients (42 women, 26 men) with a median age of 46 years. Two children were 9 and 11. The histological interpretation was more difficult for the transverse sections than for the longitudinal ones (29.4% vs. 2.2%). The pathological diagnosis of OP was typical in 30.6%, suggestive in 51.6%, slightly suggestive in 12.9% and not contributive in 4.8%. 50 patients had a mean follow-up of 50 months. 38% recovered completely and 20% recurred. 42% had mild to moderate sequelae.

Comments: This large retrospective series of onychopapilloma provides insight into clinical presentation, diagnosis and treatment of onychopapillomas. It suggests classical longitudinal excision with complete removal of lesion underneath the nail plate as the most accurate surgical technique leading to less recurrences when compared to tangential longitudinal excision. Further, the authors recommend longitudinal histopathological sections to be more diagnostic than transverse sections.

The treatment of ingrown nail: Chemical matricectomy with NaOH versus wedge resection. Akkus A, Demirseren DD, Demirseren ME, Aktas A. Dermatol Ther. 2018 Sep;31(5):e12677.

Ingrown nail is a common problem seen in the dermatology clinics. The aim of this study is to compare the wedge resection method and chemical matricectomy with NaOH in terms of operation time, postoperative pain severity, postoperative drainage, recurrence rates, recovery time, and the effects of these two methods on Dermatology Quality of Life Index. 60 patients were included. About 42 nail edges of 30 patients were treated with NaOH for chemical matricectomy and wedge resection was performed for 33 nail edges of 30 patients. Operation time for chemical matricectomy and wedge resection was an average of 7.66 ± 3.65 and 19.25 ± 5.54 min ($p < .001$). Recovery time was an average of 17.27 ± 14.22 days for chemical matricectomy and an average of 28.85 ± 17.03 days for wedge resection ($p = .004$). Recurrence was detected in

5.4% of the nail edges treated with chemical matricectomy and 3.6% of the nail edges treated with wedge resection ($p = 1.000$).

Comments: Ingrown toe nail is a common dermatological condition affecting quality of life of patients. Wedge resection, and chemical matricectomy with NaOH are common surgical techniques used in the management. Even though similar efficacy and recurrence rates are seen with both the modalities, chemical matricectomy may be preferred because of ease of operation, shorter operation time and faster recovery.

Pediatric Onychophagia: A Survey-Based Study of Prevalence, Etiologies, and Co-Morbidities Winebrake JP, Grover K, Halteh P, Lipner SR. Am J ClinDermatol. 2018 Aug 31.

Onychophagia or habitual nail biting is a common disorder affecting 6-45% of the population and is more prevalent in children. The objective of the authors was primarily to determine the prevalence of nail biting in the pediatric population. The secondary objectives were to assess the presence of psychiatric co-morbidities associated with nail biting, and the effect of treatment on nail biting. The authors administered an anonymous voluntary survey to participants at an outpatient clinic. Age, sex, psychiatric diagnosis, treatment sought, family history, and frequency of nail biting were analyzed across 282 enrolled patients aged 3-21 years. One patient was subsequently excluded due to incomplete data. Of 281 patients, 101 (37%) reported past or present nail biting lasting more than a month. Median age of onset was 5 years old (range 1-13 years). A significantly higher percentage of biters (18%; 19/104) than non-biters (6%; 11/177) were diagnosed with a psychiatric disorder ($p < 0.01$). Amongst biters, concurrent fingernail and toenail involvement was much less common (12%; 12/104) than that of fingernails alone (88%; 92/104). However, the ratio of fingernail and toenail biters to fingernail biters alone was greater in those with psychiatric diagnosis (0.36) than without (0.09) ($p = 0.07$).

Comments: Pediatric onychophagia is a common disorder with underestimated prevalence. It is often found to be associated with multiple emotional and behavioural problems. This study highlights behavioral patterns, familial, psychiatric, and other factors associated with pediatric onychophagia. The authors report a strong family history, higher prevalence of psychiatric disorders and significant treatment response in their clinical survey. Large cohort studies with meticulous design are required for further corroboration of the findings. Still, complete nail examination and evaluation of psychiatric factors are imperative in a case of paediatric onychophagia.

Ultrasound Assessment of Psoriatic Onychopathy: A Cross-sectional Study Comparing Psoriatic Onychopathy with Onychomycosis.

Moreno M, Lisboa MP, Gallardo F, Deza G, Ferran M, Pontes C, Luelmo J, Maymó J, Gratacós J.

Acta Derm Venereol. 2018 Oct 3.

This cross-sectional study evaluated the usefulness of an ultrasound technique in assessment of nail changes in 35 patients with psoriatic onychopathy and 25 with nail dystrophy secondary to onychomycosis. All patients underwent 3 examinations: a complete clinical assessment; a nail ultrasound study; and fungal culture. Nails of patients with psoriatic onychopathy presented a thinner nail plate and nail bed, measured by ultrasound, than did those with onychomycosis. The percentage of patients with a power Doppler signal ≥ 2 at nail bed was significantly higher in psoriatic onychopathy than in onychomycosis, and structural bone lesions were more frequent in psoriatic onychopathy than in onychomycosis.

Comments: Nail psoriasis and onychomycosis occasionally pose a diagnostic difficulty. Ultrasound is a non-invasive and inexpensive technique which can aid in diagnosis. The study concludes that presence of higher power Doppler signal and structural damage in DIP joints support the diagnosis of psoriatic onychopathy. Thickening of extensor tendon insertion and nail bed thickness do not help substantially in distinguishing both entities. Studies with larger representative sample and higher resolution ultrasound probes will yield more information,

Mohs micrographic surgery for nail unit tumours: an update and a critical review of the literature.

Lambertini M, Piraccini BM, Fanti PA, Dika E. *J Eur Acad Dermatol Venereol.* 2018 Oct;32(10):1638-1644.

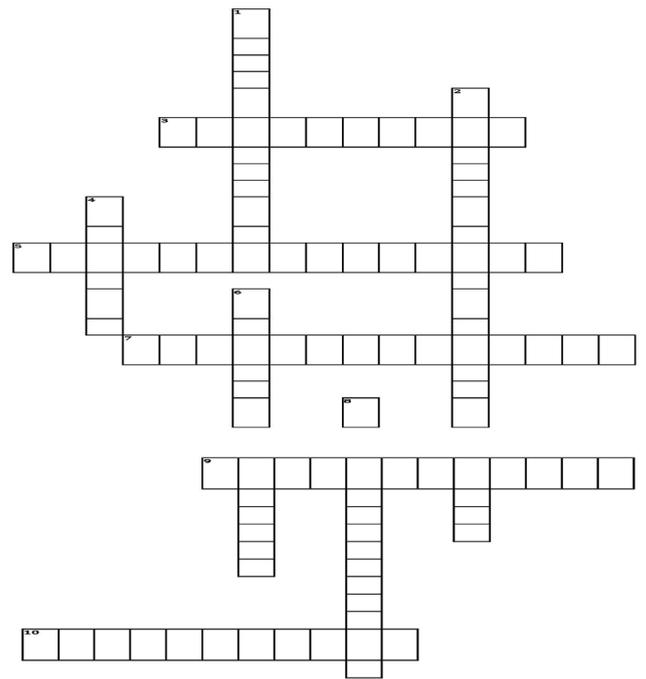
Mohs micrographic surgery (MMS) is a good treatment option for epithelial neoplasms, especially when localized in areas where tissue conservation is crucial, such as the nail unit (NU). MMS is a method of radical excision offering high cure rates due to the margin control and functional preservation. The authors aim to provide a review on the use of MMS for the treatment of the most common nail tumours. They revised the current literature on the use of MMS to treat malignant neoplasms (Bowen's disease, squamous cell carcinoma, melanoma, basal cell carcinoma, keratoacanthoma, carcinoma cuniculatum) and benign neoplasms (onychomatricoma and glomus tumour).

Comments: This comprehensive review suggests that MMS is a successful surgical option for nail tumours due to conservation of nail tissue and hence nail unit function. MMS leads to reduce recurrences due to surgical radicality, which is essential for clearing of both benign and malignant tumours. However, the authors feel that the conservative approach with functional surgery involving excision of nail unit is a better option for the treatment of non-invasive melanoma despite a conservative treatment of nail unit melanoma with MMS been proposed.

Compiled by:

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NAIL MAZE



ACROSS

3. Hemi onychogryphosis is a part of this syndrome
5. Post-acoustic enhancement is seen in this nail tumor
7. High sodium content in nail plate is characteristic of this disease
9. A stabilizer used in sculptured nails
10. Biological sensitivity resulting in Fisherman's dystrophy

DOWN

1. Pseudo knucklepads is seen in
2. Sausage link nails
4. This syndrome features apparent micronychchia
6. A drug causing subungual bulla
8. Another name for median canaliform dystrophy of Heller

Compiled by:

Dr. Vishal Gaurav
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ANSWER KEY to Nail Maze from Onychoscope Volume 7, Issue 2, July 2018

DOWN

1. AR-12
2. SPARFLOXACIN
3. NAIL DYSTROPHY
7. TAVABOROLE
9. HILDRETH

ACROSS

4. RED SPOTS
5. PROPOLIS
6. ETHYLGLUCURONIDE
8. SUPERANTIGEN
10. PARONYCHIA

Winners are:

**Dr. Siddhartha Dash, Dr. Monica Jain,
Dr. Asha Panchagavi, Dr. Suvuigya Sachan
Dr. Vishal Gaurav**

ANSWER TO PHOTOQUIZ

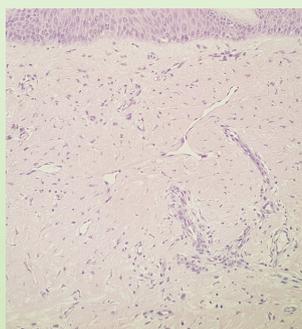


Fig c: Histopathological examination-20 X magnification

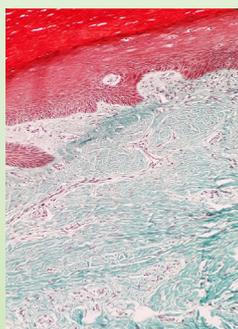


Fig d: Masson's trichrome-20 X magnification

Answer 1: Periungual fibroma is slowly growing, painless, smooth surfaced mass. Histological examination revealed a storiform dermal tumor (i.e., one with a rope-like or whorled configuration) consisting of spindle cells without atypia or mitoses. This is a periungual fibroma, a benign mesenchymal tumor. Multiple periungual fibromas may be a sign of the tuberous sclerosis complex (TSC), which is due to a mutation in the TSC1 or TSC2 gene. TSC is an autosomal dominant disease whose major symptom is epilepsy due to lesions in the brain. Our patient had no such lesions.

Answer 2: The differential diagnosis includes pleomorphic fibroma, a benign, slow growing tumor. It is a rare mesenchymal neoplasm characterized by atypical spindle cells amidst a collagenous stroma.

The other differential diagnosis is Superficial acral fibromyxoma (SAF), also known as digital fibromyxoma, is a rare soft tissue tumor with a predilection for acral surfaces. It classically presents as a pink to flesh-colored nodule located on the subungual or periungual region of the hands or feet. It is typically slow-growing and asymptomatic.

Answer 3: Treatment of periungual fibromas is surgical excision. The sample is sent for histopathological examination for confirmation.

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Histopath photo courtesy

Dr. Shruti Sharma

Scientist C
Pathologist
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ONYCHOCON, PURI, 2018

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SCBMCH, Cuttack

1st Prize in Award Paper 1

DR LOVLEEN KAUR

TOPIC: Intramatrix injection of
triamcinolone acetonide versus etanercept
in psoriatic finger nails

1st Prize in Award Paper 2

DR KUMUDHINI SUBRAMANIAN

TOPIC: Dermatoscopy used as nailfold
capillaroscopy in autoimmune connective
tissue diseases

1st Prize in Free Paper 1

Dr B V SRIPRIYA

TOPIC: Dermoscopy in onychomycosis

1st Prize in Free Paper 2

DR JISS ELIZABETH SEBASTIAN

TOPIC: Cancer chemotherapy induced
nail changes

1st Prize in E-Poster

DR SANDHIYA RAMESH

TOPIC: A prospective clinical study for
evaluation of KOH mount, Histopathology and
culture of nail clippings in the diagnosis of
Onychomycosis

NSI Heartily Congratulates

Drs Siddhartha Dash, Srikanta Acharya, Lovleen Kaur and Kumudhini Subramanian for winning the NSI Travel grant for ONYCHOCON 2019.

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