

Excision of Periungual Myxoid Cyst Using Proximal Nail Fold Flap.

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ABSTRACT

Background: Periungual myxoid cyst is a benign cyst of the digits, usually occurs in hands although reported in toes as well. They are commonly located between distal nail crease and proximal nail fold. Aim: The aim of our study was to study the outcome of excision of periungual cyst using flap surgery. **Methods:** Clinical features of all six patients were recorded. All were treated with flap surgery. Intra operative findings and treatment outcome were recorded and analyzed. **Results:** We enrolled four male and two female patients with average age being 27+/-7.5 years. Presenting symptom was swelling over dorsal surface of distal interphalangeal joint. Nail plate deformity was seen in all patients. Follow up was done for 8 months to 1 year. Follow up period was un-eventful. **Conclusion:** Periungual myxoid cyst have characteristic clinical presentation. Excision using flap surgery is an excellent mode of treatment allowing better visualization, easy exploration and excellent outcome.

Keywords: Peri ungual myxoid cyst, flap surgery, nail plate deformity.

INTRODUCTION

Digital myxoid cyst is a benign, cystic swelling that often presents as a solitary, slowly growing, painful swelling in the superficial dermis of the distal and dorsal portions of the fingers, and far less commonly occurs in the toes. The lesion usually does not grow beyond a size of >20mm. It is often seen in adults and has a predilection for females.^[1] This is often seen in relation to the proximal nail fold of fingers and is responsible for causing nail plate abnormalities especially transverse nail depressions and also alteration of nail integrity, curvature, and color.^[2,3] These cysts can lead to development of osteoarthritis, though rarely.^[4] Treatment options vary depending upon the characteristics of the lesion, the patient related factors and ultimately the surgeon's choice. We present our experience of excision using proximal nail fold flap technique.

MATERIALS AND METHODS

A total of 6 patients presenting with periungual myxoid cyst over a period of one year from December 2015 to December 2016 were enrolled in our study. Proper consent for excision of the cyst

Was taken from all the patients, all of whom agreed to be on follow up. Subsequent to this, a proper and relevant history was taken and a clinical examination was done and both were recorded.

The surgical site was prepared and draped [Figure 1]. Following steps were taken to excise the cyst.

* The digit to be operated was anaesthetized locally near the lesion using 2% lignocaine and 1: 100000 epinephrine; no digital block was given.

* Digital exsanguination and tourniquet were used for making the field relatively avascular.

* Marking was done just outside the boundaries of the swelling.

* Subcutaneous tissue was dissected and the cyst identified. [Figure2]

* The cyst was dissected and removed in toto. [Figure3]

* The flap was repositioned and sutured by prolene 4 – 0. [Figure 4]

* Antiseptic dressing was applied and the excised cyst was sent for histopathological examination.

Post operative dressing was done after 2 days. Stitches were removed after 1 week. Patients were called for follow up after 4 months, 8 months and 1 year.

RESULTS

In our study, a total of four males and two female patients were enrolled. Age at the time of

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presentation was 20 to 35 years with an average of 27.5+/-7.5 [Table 1]. Ring finger was involved in four patients and index finger in two patients. Duration of complaints ranged from 6 months to 1 year.

On examination firm, non tender, non fluctuant swelling with negative transillumination was noted in each patient. All patients had swelling over the dorsal surface of the distal interphalangeal joints. Nail plate deformity was seen in all the patients. However onycholysis and discolouration of nails were not seen in any of the patients. X-Ray of the digit showed hyperdense shadows over distal phalanx with normal underlying bone and joint. Surgical excision was done using flap surgery. The cysts were located, dissected and then excised. The average size of the cysts ranged from 4 mm to 6 mm. The post operative period was uneventful. A prolonged follow up was done extending from 8 months to 1 year. There was no recurrence in any of our patients. We noted an excellent cosmetic outcome 1 year post operatively [Figure 5]



Figure 1: Periungual Myxoid Cyst.



Figure 2: Exploration of the cyst.



Figure 3: Excision of cyst in toto



Figure 4: Repositioning of flap using prolene 4-0



Figure 5: Excellent cosmetic outcome after 1 year of excision

DISCUSSION & CONCLUSION

Digital mucoid cysts are known by a number of synonyms like cutaneous synovial (myxoid) cyst,

focal cutaneous mucinosis, digital synovial cyst and dorsal digital ganglion cyst.^[5] These cysts appear clinically as soft, smooth, clear or flesh-colored nodules that develop on the dorsal digits between the distal interphalangeal joint and the proximal nail fold.^[5-8] These periungual swellings are usually solitary and are often seen lateral to the midline.^[8] These slowly growing cysts are asymptomatic initially but can become tender and painful in some patients, causing decreased range of movements at the adjoining joint and even cause deformity of the nail apparatus.^[6-10]

The diagnosis is mainly clinical but can be confirmed by, X-ray, high resolution ultrasonography or magnetic resonance tomography or a histopathological examination. Histopathology reveals that the cyst is predominantly composed of fibroblasts present in a loose myxomatous connective tissue matrix.^[11] Although not commonly encountered commonly by the dermatologist, these are one of the important differential diagnosis that one needs to keep in mind while dealing with a digital swelling.

A number of treatment options have been tried with varying success rates in different patients. The commonly employed modalities include incision and drainage, intralesional steroid injection, cryotherapy, carbon dioxide laser, electrocoagulation, and several means of surgical treatment.^[12-14] The choice depends on the size, location and the number of cysts. It also depends on the degree of the cosmetic impairment and the degree of nail and joint affliction.

In our study, we used the surgical excision with flap technique as the treatment modality for periungual mucoid cysts. In this technique, a flap is raised near the proximal nail fold to include the cyst plus any tissues between the proximal margin of the cyst and the distal interphalangeal joint, following which the cyst is excised completely after proper dissection from the surrounding subcutaneous tissue. With a few variations, this is usually followed by repositioning back the flap and then proper closure of the incised site. This is quite similar to the proximal nail fold flap technique done at many other centres.^[15]

Our patients did very well and excellent cosmetic results were seen with no recurrence even after one year of surgery.

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