

Surgical Matricectomy in the Management of Ingrown TOE Nail-Experience from Nigeria

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Ingrown toenail is a source of major discomfort to the patient. Avulsion of the nail and surgical or chemical ablation of the nail matrix is the treatment of choice for chronic stage 3 ingrown toenails. The result of surgical matricectomy in a private center was reviewed. A review of all cases of ingrown toe nail managed at Lily hospital, Warri from January 2006 to December 2010 was undertaken. Thirty-three cases with stage 3 ingrown toenail were managed over the study period. Thirty-two had Zedek's operation and one had wedge resection. All had post-operative antibiotics. There was a case of delayed healing, but no wound infection and no recurrence at 1 year follow up. Surgical matricectomy is a safe and effective procedure for the management of ingrown toe nail.

Key words: Zedek's operation, Ingrown TOE-Nail.

Ingrown toenail is a cause of severe discomfort and pain to patients and common reason for consultation both in General Practice clinics and Specialty clinics. Ingrown toenail is classified into three stages¹; recently others have added more stages². While the early stages can be managed conservatively, the late stage requires surgical treatment, partial or complete avulsion of the nail with or without ablation of the nail matrix. Ablation of the nail bed can be carried out chemically³, or via laser⁴, surgically⁵ or by electrocautery⁶. Chemical matricectomy has the lowest recurrence rate but carries the risk of increased wound

infection and prolonged healing time⁷. We reviewed the cases of ingrown toenail managed in Lily hospital, Warri who had surgical matricectomy and compared our results with reports from other centers.

METHODS

This is a retrospective study, extending from January 2006 to December 2010. The study center is Lily clinic, a 45 bed private hospital located in the center of Warri, Nigeria. The case notes of patient managed for ingrown toenail was retrieved and analyzed. Patients with early ingrown toenail were managed conservatively and therefore not included in this study.

Eight patients had infected ingrown toenails and were first treated with antibiotics before been offered surgery. There was a history of wearing of tight fitting boots in thirty-two patients. Three patients have had previous avulsion of the nail without matricectomy.

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The procedure was done as a day case under digital block with 1% plain xylocaine and tourniquet. One patient had a wedge resection of the affected nail and matrix; and the others had total excision of the affected nail and matrix as described by Zadik⁸. The wound was dressed with sulfratulle gauze and patient discharged home. Patients were given co-amoxiclav for five days and tramadol and paracetamol as analgesics. Patients were instructed to keep the feet dry and elevate the lower limb for 48 hours; change of dressing was done at 48 hours and 5 days; at 14 days the wound was left open after inspection.

The patients were followed up at 2nd day post surgery, 5th day, 14th day and after 4 weeks of surgery. They were then given 3 monthly appointments.

Table 1. Age incidence

AGE (Years)	Male	Female	Total
20 – 29	5	6	11
30 – 39	10	2	12
40 – 49	5	1	6
50 – 59	3	-	3
60 – 70	-	1	1
Total	23	10	33

DISCUSSION

Ingrown toenail nail is reported to be commoner in men and this is supported by this study⁹. The mean age of presentation was 35.71 years which is also consistent with other studies, though cases in infancy and congenital ingrown toenail have been reported^{9,10,11}.

Simple surgical treatment of stage 3 ingrown toenail include nail avulsion, debridement of the lateral nail groove and/or trimming of the lateral nail plate and incision and drainage of the abscess of the lateral nail fold but these procedures are marred by high recurrence rate 32-75%¹².

To reduce the recurrence, matricectomy was included in the surgical procedure. Recurrence from chemical matricectomy was reported to be less than for surgical matricectomy but has a delayed healing time and increased rate of wound infection⁷. Recurrence of 1-21% has been reported

RESULTS

There were 52 cases of ingrown toenail seen during the period of study. Nineteen had early cases and were managed conservatively. Thirty-three had late cases (stage 3) and had surgery done and formed the basis of this study.

Twenty-three were males and ten females. The age range was 21 to 65 years with a mean age of 35.71 years (table 1). The duration of symptoms ranged from 2 months to more than 5 years (table 2). Twenty-four cases involved the right big toe, and nine the left big toe, there was no bilateral involvement in this study.

Thirty-two cases had healed at 14th day review, while the last was healed at the 4 week review. There were no complications and at 1 year of follow up, no recurrence has been recorded.

Table 2. Duration of symptoms

Duration	Male	Female	Total
<6months	16	-	16
6 - 12 months	5	4	9
1 - 5 years	2	5	7
>5 years	-	1	1
Total	23	10	33

for use of phenol ablation of the matrix and for surgical matricectomy 20-41%^{13,14}. Zadek reported no recurrence after his procedure and this is supported by this study⁸.

The other common complications of ingrown toenail surgery are wound infection (5.2%) and osteomyelitis (0.8%)¹³. There was no post-operative infection or osteomyelitis in this study.

CONCLUSION

This study has shown that surgical matricectomy is a safe and effective procedure for late stage ingrown toenail.

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