

가

:
: 1995 10 2003 5 1 가가 12
. 가 9 , 가 3 . 13.4 ,
20.3 . 가 9 , 2, 3, 5
가 1 . 9 8 가 , 1
. 2, 3, 5 .
가 , .
, ,
, ,
, ,
: 6 , 2 , 1
3 .

Dupuytren 1847 10 ,
6) 13,15)
2,7,11,13,15)

:
가 가 2
Tel: 032) 340-2260, Fax: 032) 340-2671, E-mail: yskim@hfh.cuk.ac.kr



Fig. 1. Typical clinical appearance of subungual exostosis with erosion of the medial aspect of the nail

가 2-8,10), 가
 , 가
 1995 10 2003 5 1
 가 가 12 (Table 1).
 16.7
 13.4 , 가 9 , 가 3
 20.3
 (Fig. 1)
 , 9 (75%), 3
 (25%) . 9 8
 (88%) (Fig. 2), 1
 (12%)
 (Fig. 3).
 10 가 8 , 2
 3
 2 , 3 1
 1 가 . 4

Table 1. Summary of cases.

Cases	Age at OP	Duration of Sx.	Sex	Site	Location	Symptoms	Trauma Hx	Previous Hx	Complication	Result
1	16+3	5 ms	M	Lt. H	DM	Nail deformity & pain	none	nail excision (×1)	none	good
2	12	5 yrs	F	Lt. H	DM	Nail deformity & pain & inf.	none	nail excision (×2)	recur	poor
3	6	6 ms	F	Rt. H	DM	Nail deformity & pain	none	none	none	excellent
4	12+4	2 yrs	M	Lt. H	DM	Nail deformity	none	none	none	excellent
5	14+4	3 ms	F	Rt. 3 rd	C	Nail deformity & pain & soft ts ulcer	none	none	none	good
6	8+2	8 ms	F	Rt. H	DM	Nail deformity & pain	none	laser therapy	none	excellent
7	10+8	1 yr	F	Rt. 5 th	C	Nail deformity	none	none	none	good
8	7+8	8 ms	F	Lt. H	DL	Nail deformity & pain	none	none	none	excellent
9	6+8	2 yr	F	Lt. H	DM	Nail deformity & pain	none	laser therapy	none	excellent
10	31+2	7 yr	F	Rt. 2 nd	C	Nail deformity & pain	none	none	none	good
11	14+9	6 ms	M	Lt. H	DM	Nail deformity & pain	none	none	none	excellent
12	9+5	6 ms	F	Rt. H	DM	Nail deformity & pain & inf. & ulcer	none	none	none	good

* H: Hallux DM: Dorsomedial DL: Dorsolateral C: Central

가 2 ,
 가 2
 가 (Fig. 2, 3) (Fig. 5A). (osteotome)
 가 (Fig. 5B)
 가 (Fig. 4). ,
 8
 (Fig. 5C).
 가 , 가
 가



Fig. 2. Preoperative radiography showed dorsomedially projecting bony mass. The lesion arised from the physis. There was no disruption of the distal phalanx.

16.7 6
 (Fig. 6), 2 , 1
 3
 (Table. 1).
 6
 12 1
 1



Fig. 3. Preoperative radiography showed centrally projecting bony mass at the second toe.

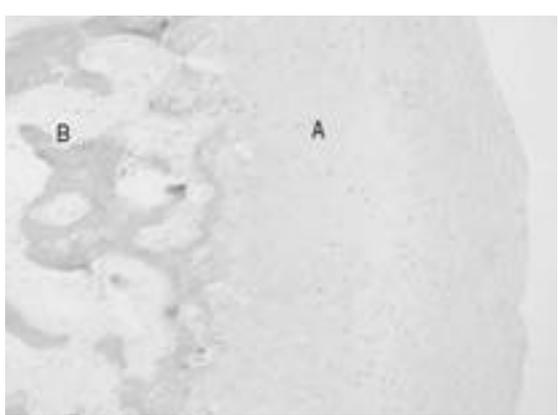


Fig. 4. Excised specimen showed cartilage cap (A) and mature trabecular bone (B).(H-E stain, × 40)

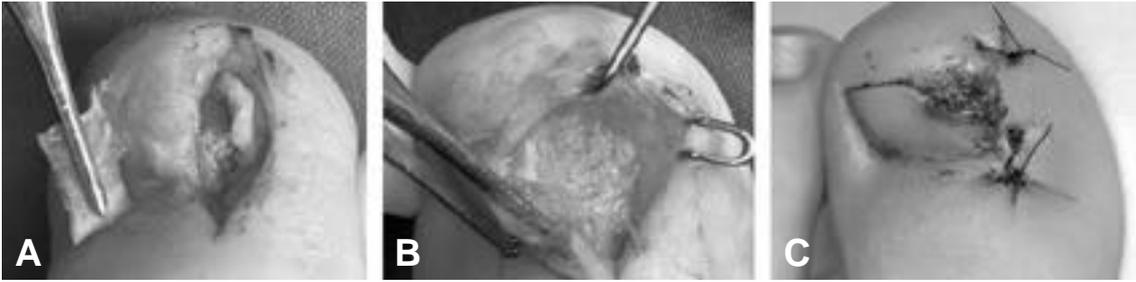


Fig. 5. (A) The nail was partially dislodged exposing the exostosis. The counterpart portion of the nail was preserved in place. (B) Subungual exostosis was removed by osteotome. (C) After removal of the exostosis, the nail bed was repaired and the nail was relocated and covered the phalanx.



Fig. 6. This case showed excellent result (postop 9 month)

가(91.6%) 20 , 9
 (75%)
 , 1966 Evison
 7), Davis 4)
 44%
 12 1
 ,
 , 가 1,3),
 가 , 4 (33%)

11

15

(subungal verrucae),

5,16,17)

10,12,15)

가

가

가

Davis 4) 35 , 312

51 (16%)가 18

67%

12

9

75%

2,3,5

가

가 3

1

10

5

10~20

가 6

11

s(subungual) exostosis. *Am J Surg Pathol*, 12: 368-378, 1998.

- 16) **Multhoop-Stephens H and Walling AK:** Subungual (Dupuytren 's) exostosis. *J Pediatr*

Orthop, 15: 582-584, 1995.

- 17) **Multhoop-Stephens H and Walling AK:** Subungual exostosis: a simple technique of excision. *Foot Ankle Int*, 16; 88-91, 1995.

Abstract

Surgical Treatment for Subungual Exostosis in the foot

**Kee Haeng Lee, M.D., Hyoung Min Kim, M.D., Chan Woong Moon, M.D.,
Bum Seong Lee, M.D, Youn Soo Kim, M.D.**

Department of Orthopedic Surgery, Holy Family Hospital, The Catholic University of Korea

Purpose: We described our experience with subungual exostosis in the foot for which we used different surgical technique according as location and size of lesion and revealed excellent results.

Materials and Methods: We experienced 12 cases of subungual exostosis that were treated surgically and followed them more than one year between October 1995 and July 2003. There were nine females and three males. The average age of patients at surgery was 13.4 years. Duration of symptoms was 20.3 months on average. The lesion involved the hallux in nine cases; eight dorsomedial and one dorsolateral aspect of distal phalangeal bone. It involved the second, the third, and the fifth toe in one each; all central aspect of dorsum of distal phalanx. We used surgical technique that involves approaching the exostosis under the nail to preserve nail coverage for lesion in the hallux. The nails were extracted totally but preserved nail bed as much as possible in other toes. Results were based on appearance of the regenerated nail and presence of recurrence. Excellent results were those in which the nail appeared nearly normal and there was no clinical or radiographic evidence of recurrence. Good results were associated with a minor nail deformity such as ridging, and no evidence of recurrence. Fair results had obvious nail deformity or a minimal asymptomatic recurrence that was discernable only on radiograph. Poor results were associated with a clinically evident symptomatic recurrence.

Results: When the lesion involved hallux, there were six excellent and two good results, and one poor result. All cases that involved other toes revealed good results.

Conclusion: We suggest that different surgical technique might be applied according as location and size of the lesion to achieve satisfactory results for subungual exostosis in the foot.

Key Words: Foot, Subungual exostosis, Surgical technique

Address reprint requests to

Youn Soo Kim, M.D.

Department of Orthopedic Surgery, Holy Family Hospital,

2, Sosa-Dong, Wonmi-Gu, Buchon-city, Kyunggi-Do, 420-717, Korea

TEL: 82-32-340-2260, Fax: 82-32-340-2671, E-mail: yskim@hfh.cuk.ac.kr