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**Abstract**

**Replantation of the Great Toe**

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**Purpose:** The purpose of this study was to present the clinical analysis of the results and our experience of the replantation surgery of the great toe.

**Materials and Methods:** Between March 1995 and December 2002, twelve great toes, amputated from the distal phalanx to proximal phalanx were replanted. The complete types were 5 cases and incomplete types were 7 cases. The guillotine injuries were 4 cases and the crushing injuries were 8 cases.

**Results:** Replantation in eleven out of the twelve amputations survived. The cases of revision were 3 cases due to venous thrombosis. Patients were followed up for a mean period of 2.2 years. The mean total active motion of the first MTP joint was 80 °. The fusion of IP joint was carried in 7 cases due to the amputation of the IP joint level. The shortening of the replanted great toes was present, with average 0.9cm. The two point discrimination was 7-8mm except 2 cases with loss of nerve.

**Conclusion:** Although replantation of the great toe remains to be controversial, replantation of the great toe should be considered in well-motivated patients because successful replantation regains an important component of the foot and good functional, cosmetic results.

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**Key Words:** Great toe, Replantation

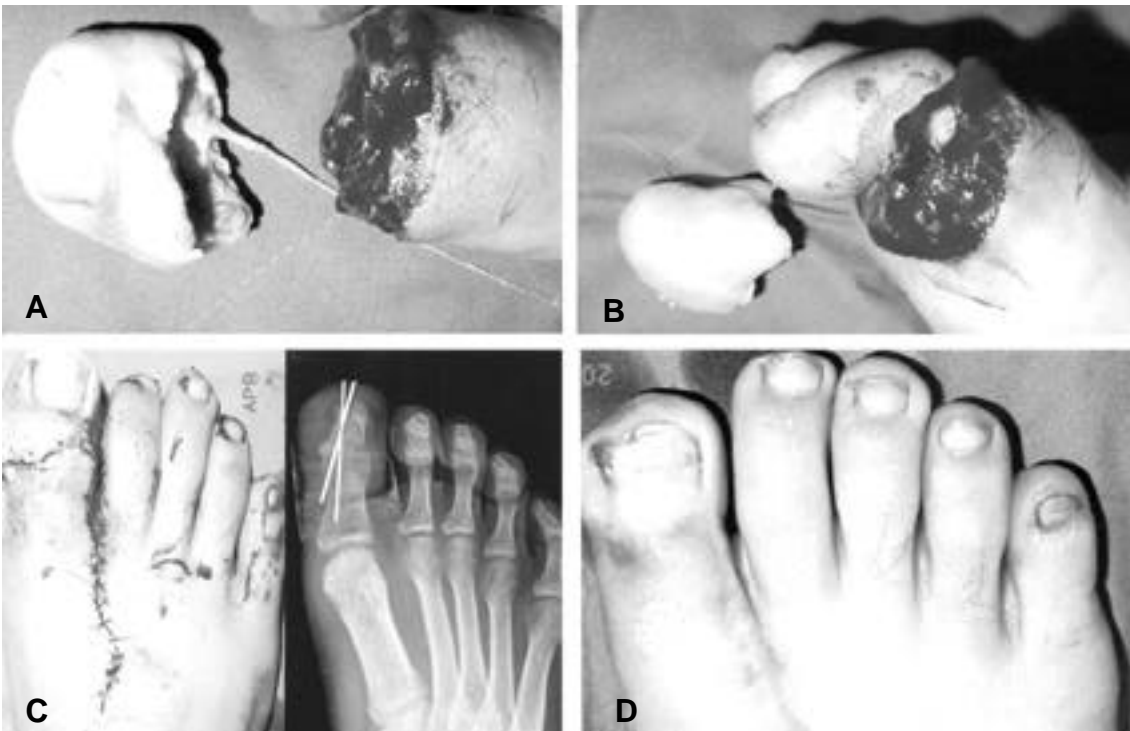
가 11 가 1 7  
 48 26 ,  
 가 2 , 가 3 ,  
 가 7 가  
 가 (guillotine) 4  
 8 . 5  
 7 , 4  
 (Table 1).  
 가 .  
 2.  
 8  
 2 3 K-  
 가 ,  
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 1. 2.2 ,  
 1995 3 2002 12 1 11  
 12 91.6% , 12 3  
 12

**Table 1.** Summary of the data of great toe replantation in 12 patients

Case	Sex/Age	Level*	Injury Type	Amputation Type	Associated Injury
1	M/25	IP	Crushing	Complete	
2	F/23	PP	Crushing	Incomplete	
3	M/24	IP	Guillotine	Complete	
4	M/38	DP	Guillotine	Complete	
5	M/26	IP	Crushing	Incomplete	Metatarsal fracture
6	M/18	IP	Crushing	Complete	
7	M/16	IP	Guillotine	Complete	2 toe amputation
8	M/38	PP	Crushing	Incomplete	2 toe amputation
9	M/30	IP	Crushing	Incomplete	2.3.4 toe fractures
10	M/7	DP	Crushing	Incomplete	
11	M/20	IP	Crushing	Incomplete	
12	M/48	PP	Guillotine	Incomplete	

\* IP: Interphalangeal joint, PP: Proximal phalanx, DP: Distal phalanx

:  
 2 1. 1  
 18  
 8  
 K-  
 0.9 cm  
 2  
 7 8 mm  
 2  
 , 3  
 2 4  
 4 가 80  
 8 mm  
 (plantar callosity)  
 가  
 (Fig. 1).



**Fig. 1.** (A, B) A 21-year-old man sustained complete great toe amputation at the IP joint level due to crushing injury. (C) Immediate postoperative photograph and radiograph shows replanted state and the IP joint fixed for arthrodesis using two K-wires. (D) Appearance 4 months after the operation.

2. 2

38

가

K-

가

가

가

(Fig. 2).

3. 3

24

K-

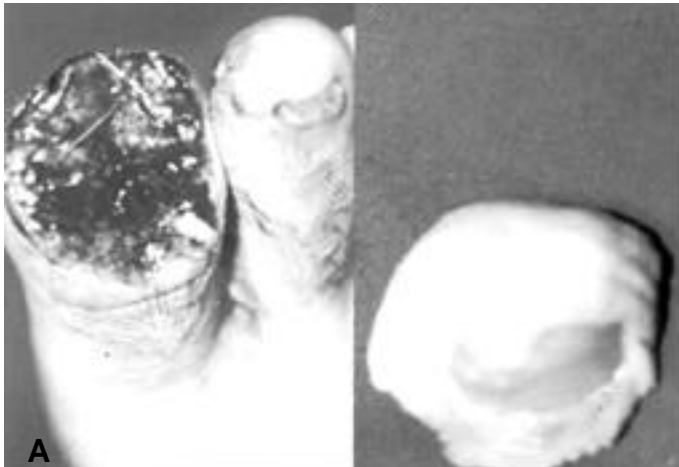
2

6

8 mm,  
(Fig. 3).

70

가



**Fig. 2.** (A) 38-year-old man sustained complete great toe amputation at the distal phalangeal level due to guillotine injury. (B) Immediate postoperative photograph shows replantated state. (C) Appearance 12 months after the operation.



**Fig. 3.** (A) 24-year-old man sustained complete great toe amputation at the IP joint level due to guillotine injury. (B) Immediate postoperative photograph shows replanted state. (C) Appearance 6 months after the operation.

2,3

Mann<sup>3</sup>

10

가

가

1

가

2

가  
1

가 (mobilization)

가

가

Hughes<sup>4</sup>

K-

60%

가

(stance phase) 75%

가

0.9

(peak pressure) cm

가

가

가

Barca<sup>5</sup>

가

가

가 2  
가 2

가 2

Werber

<sup>6</sup> 1982

3

, Muramatsu<sup>7</sup>

가

3

2  
7 8 mm

Sakamoto<sup>1</sup> 4

2

가 가

가

Sabapathy<sup>8</sup> 11

50

4

1,2

가 8

2

가 가

가

Ademoglu<sup>9</sup> 17

12

50

가

가

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