RESULTS AND DISCUSSION

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Advances in microsurgical techniques has enable surgeons to replant amputated parts with a high rate of success. Replantation of complete or incomplete nonviable amputations has become a routine procedure in the majority of hand and microsurgery units around the world *(Soucacos et al., 1995)*.

Although the success of replantation differs from one center to another. It is nearly 100% for ideal replants *(Kleinert et al., 1980)*.

Gerostathopoulos et al., (1995), in their series of 16 cases of hand replantations (mid palm amputations) 14 were successfully replanted, the relation of the survival rate with type of injury showen in (Table 2).

Table (2) : The relation between type of injury and number of survivals

Type of injury	No. of patients	No. of survivals
Guillotine	9	9
Crush	5	4
Avulsion	2	1
Total	16	14

The two failures in this series was unsaccessful replantation of an avulsion type amputation injury due to the no-reflow phenomenon and crush injury which was lost to infection in the immediate postopeative period.

Kleinert et al., (1980) in their series of 347 replantations reported 90% survivals for hand and digit replants.

Weiland et al., (1977) in their analysis of techniques and functional results in 71 patients with 86 replantations of hands and digits have the following results (Table 3).

Table (3) : The relationship between the site of amputation and survival rate.

Site of amputation	No. of cases	Survival
Metacarpals	12	58%
Metacarpophalangeal joint	6	18%
Proximal phalanx	14	42%
Proximal interphalangeal joint	15	25%
Middle phalanx	21	35%
Distal interphalangeal joint	13	38%
Distal phalanx	12	40%

In the total series of 86 completly amputated hand units 52 were unsuccessful.

However, they achieved a success rate of 69.2% in 1975 and in a series of 50 replantations done between Jon. 1976 and Oct. 1976 their success rate was 90%.

Results improved with more experience in the technique and with more carful selection of patients.

Chow et al., (1979) report a series of 17 thumb replantations, in which the survival rate was 82.4%. Satisfactory results have been obtained with replantation of the thumb at the level of the interphalangeal joint (Table 4 and 5).

Table (4) : Results of replantation in relation to the site of amputation

Site	No. of cases	Survival	Failure
Interphalangeal joint	9	7	2
Proximal phalanx	7	6	1
Metacarpal	1	1	0
Total	17	14	3

Table (5) : Results of replantation in relation to type of injury

Type	No. of cases	Survival	Failure
Local crush	12	11	1
Extensive crush	3	2	1
Avulsion	2	1	1
Guillotine	0	-	-
Total	17	14	3

Vlastou & Earle (1986) believe that replantation should be attempted in all cases of thumb amputation in which the part is available.

In their series of 23 thumb replantation they had 91.3% (21 survivals) success rate, even the seven cases of avulsion injury were successfully replanted.

Yamano (1985) in his series of 87 fingers in 70 patients only five fingers failed to replant and seven fingers had partial necrosis, but the remainder survived.

Foucher et al., (1981), in a series of 32 complete distal amputations, have a success rate of 55%, but their results show that with the help of leeches, very distal replantation may be very valuable.

Urbaniak et al., (1978) in their series of 121 amputated digits, 57 of these patients have had a partial amputation, with a 93% survival rate, and 64 total amputations have been replanted with a success rate of 80%.