INTRODUCTION AND HISTORICAL REVIEW

The advent of microsurgery has added a new dimension in the managment of severe mutilating hand injuries. Amputated parts are now routinaly replanted in Many centers allover the world *(Kleinert et al., 1977)*.

Until the fifties, the vascular surgeons were unable to anastomose blood vessels 2 or 3 mm in diameter. The solution of difficult reconstructive problems requiring small vessels anastomosis represented a tough barrier.

Nylen of sweden in 1921 was the first to intrdouce the microscope for clinical use. It was not until 1959 when Douglas realized the first experimental digital replantation in monkeys. These experiments were followed by the work of Jacobson and Suarez in 1960 who utilized the operating microscope to anastomose vessel 1mm in diameter.

Kleinert, kasdan and Romera in 1963 reported the first thumb revascularization. This was done by repairing a digital artery and a dorsal vein without microscope.

Horn successfully replanted a hand in 1964. Bunke and Schulz 1965 discribed the technique of microvascular

anastomosis in experimental digital replantation in the rhesus monkeys.

Komatsu and Tamai in 1965 realized the first successful human replantation in a 28 years old male patient whose right thumb was completely amputated at the level of the metacarpophalyngeal joint.

In 1967, the surgical team of shaugai hospital reported 20 successful digital replantations.

Synder, stevenson and Brown published in 1972 the first successful replantation of an avulsed thumb, nervous and tendinous repair were done 4 months later.

In 1973, the American replartation mission to china reported about the great advancement in microsurgery by the team of Dr. Tchen who performed more than 220 replantations in the preceeding 5 years, with 45% success rate.

O'Brein et al., in 1973 reported 74% success in 31 digital replantations. The poor prognosis of avulsion was outlined, as they had 100% failure with this mechanism of injury.

Numerous reports of digital replantations appeared in the world's literature. Patency rates for small vessel anastomosis became predictable and the success rate increased gradually,

paralleling the improvments of surgical technnique and microvascular instruments and suture materials *(Kleinert et al., 1977)*.