

STAGED FLEXOR TENDON RECONSTRUCTION IN THE FINGER: A COMPARATIVE STUDY BETWEEN PULP TO PALM AND PULP TO WRIST TENDON GRAFT.

Thesis

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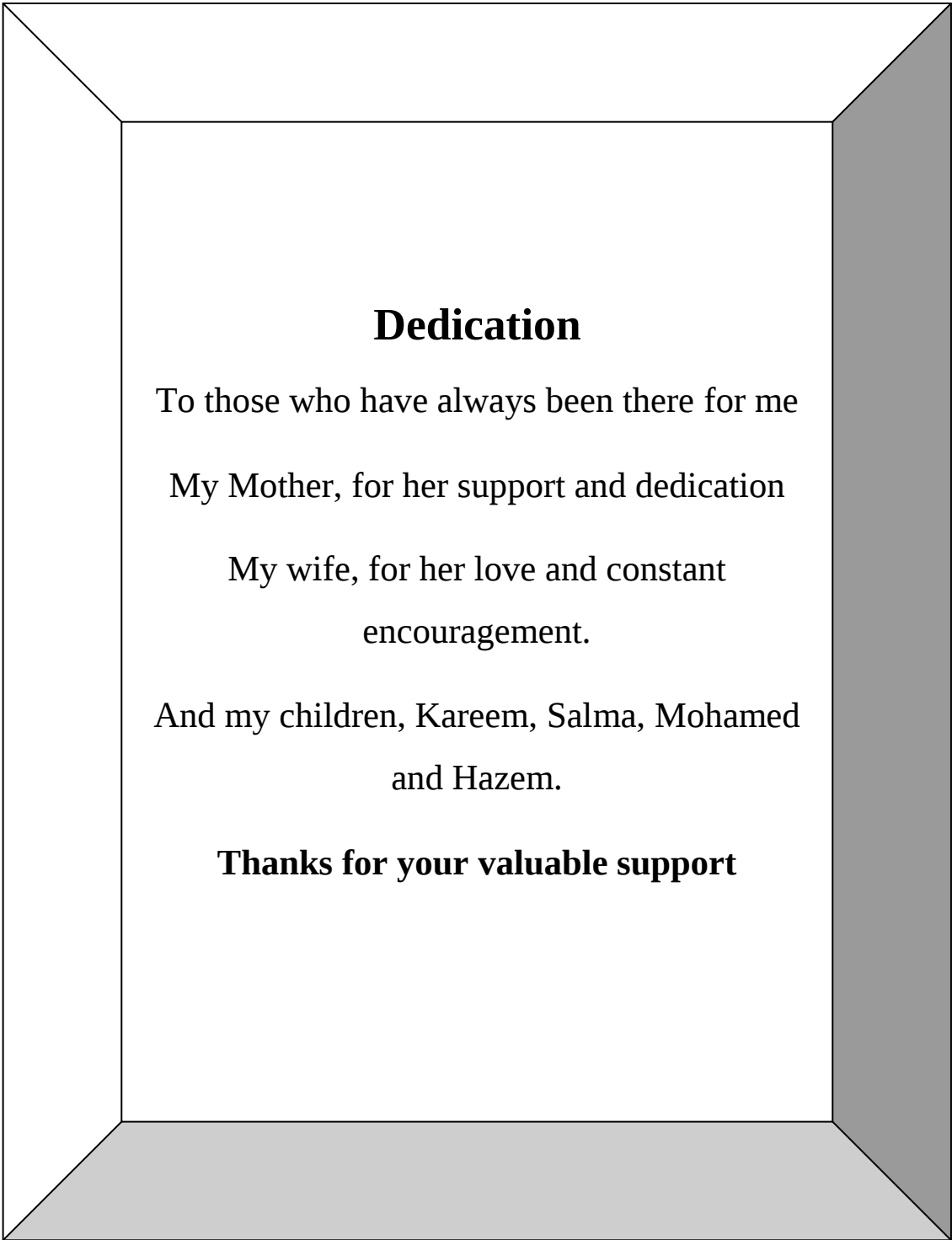
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Dedication

To those who have always been there for me

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My wife, for her love and constant
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List of Abbreviations

FDS	Flexor digitorum superficialis
FDP	Flexor digitorum profundus
FPL	Flexor pollicis longus
PL	Palmaris longus
ROM	Range of motion
TAM	Total active motion
MCP	Metacarpo phalangeal joint
PIP	Proximal interphalangeal joint
DIP	Distal interphalangeal joint
IP	Interphalangeal joint
PA	Palmar aponeurosis
A1	First annular pulley
A2	Second annular pulley
A3	Third annular pulley
A4	Forth annular pulley
A5	Fifth annular pulley
C1	First cruciform pulley
C2	Second cruciform pulley
C3	Third cruciform pulley
VLS	The viniculum longum superficialis
VLP	The vaniculum longum profundus
VBS	The veniculum brevis superficialis
VBP	The vinculum brevis profundus

i.e.	istoes (that is to say)
e.g.	examp <i>li</i> gratia (for example)
mm	Millimeter
cm	Centimeter
CT	Computed tomography
No.	Numéro (number)
SD	Standard deviation
Rt	Right
Lt	Left

Introduction

Regaining satisfactory digital function after flexor tendon repair within the digit remains to be a difficult problem in hand surgery. Until 1969s, it was universally recommended that flexor tendons divided in Zone II (the area later referred to as “no man’s land”) shouldn’t be repaired. Bunnell taught that “it’s better to remove the tendon entirely from the finger and graft a new tendon smooth throughout its length (**Bunnell 1918, Verdan 1960, Kleinert 1967 & Michael et al 2002**).

Following mutilating hand trauma, priorities of treatment are to maintain adequate circulation and to have protective skin coverage, proper alignment of bones and joints and restoration of a soft bed for tendon gliding. Primary repair of the injured flexor tendons remains the gold standard for regaining satisfactory digital function. However, in spite of careful primary treatment, the tendon and its gliding bed may be damaged so that a healing complex of scar develops and function is lost . In such severe injuries, tendon reconstruction is indicated and this can be done as one stage or multiple stages procedure. Single stage tendon grafts are indicated when no significant scarring is present and no associated joint, skin or pulley reconstruction is needed. The goal here is merely to replace the tendon (**Hunter et al 1993 & Amadio et al 1998**).

In 1965, **Hunter** presented evidences that a new tendon bed and sheath would form in response to gliding tendon prosthesis and that a free tendon graft could be inserted in the new sheath and remains functioning. This was the concept behind Staged flexor tendon reconstruction which is indicated in most instances where the tendon gliding bed has been damaged