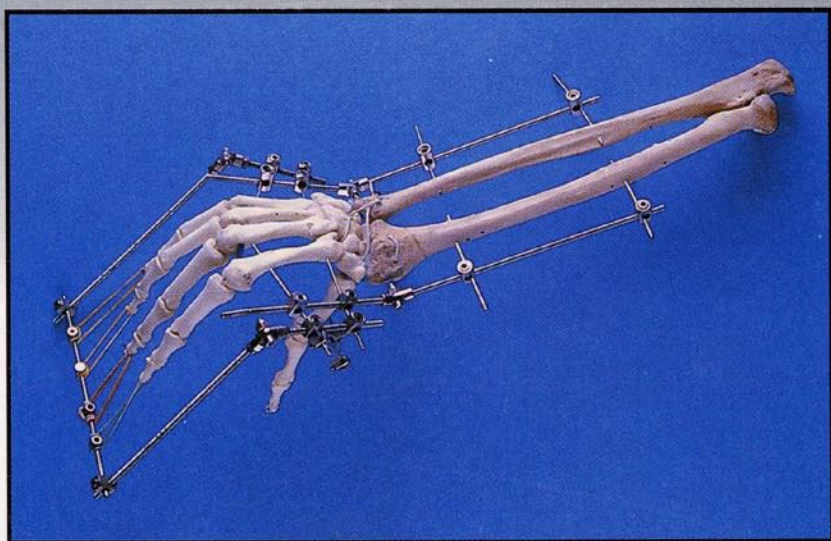


JOSHI'S EXTERNAL STABILISATION SYSTEM

BASIC TECHNIQUES **As applied to Hand and Wrist**

Dr. B.B. JOSHI



Published by

JESS Research & Development Centre

O.N.G.C. Complex, No. 10, Bandra Reclamation (W),
Mumbai-400 050.

INDEX

Page No.

CHAPTER - I

JESS - Introduction	1
----------------------------------	----------

CHAPTER - II

JESS - Basic Components and Instrumentation

Basic Components of JESS:	3
- Link Joints.	3
- Connecting Rods.	8
- K-Wires.	8
- Distraction and Compression Units.	8
- Hinges.	12
- Plates.	14
- Threaded Sleeve and nuts.	15
Instrumentation.	16

CHAPTER - III

JESS - Safe Zones For Penetration of Wires in the Hand and Forearm

- Distal phalanges.	17
- Middle phalanges.	17
- Proximal phalanges.	18
- Metacarpals.	18
- Radius	19
- Ulna.	19
- Thumb.	19

CHAPTER - IV

JESS - Basic Segmental Holds For Frame Construction

Phalangeal Holds	21
- Distal Phalangeal Holds.	21
- Pan-phalangeal Holds.	22
- Phalangeal Hold for Individual Phalanx or Thumb Metacarpal.	23
- Phalangeal Hold for Individual Phalanges of the Central Rays.	23
- Phalangeal Hold for Axial Distraction.	23

Metacarpal Holds	23
- Unilateral Metacarpal Holds.	23
- Standard Bilateral Metacarpal hold.	24
- Reinforced Type 1 Metacarpal Hold.	24
- Reinforced Type-2 Metacarpal Hold.	25
Radial Hold:	
- Simple Radial Hold.	25
- Reinforced Radial Hold.	25
Ulnar Hold:	
- Simple Ulnar Hold.	25
- Reinforced Ulnar Hold.	26
Forearm Hold:	
- Simple Forearm Hold	26
- Delta Frame for Forearm Hold.	26

CHAPTER V

JESS - Frame Construction.

Basic Frames

- U Frame.	27
- L Frame.	28
- Unilateral Frame.	28
- Dorsolateral Frame.	28
- Bi-lateral Frame.	29
- Delta Frame (Double Dorsolateral Frame).	29
- Angled "J" Frame.	30
- Syndactyly Frame.	30
- Web Spacer Frame.	31
- Ray Frame.	31
- Modified Ray Frame.	32
- Multiple ray extensions to the digits.	32

Hand and Forearm Frames

- Positional Frames for the Hand.	33
- Standard Hand Frame	34
- Extended Hand Frame	40

CHAPTER VI

JESS - Clinical Applications.

- Role of JESS in Phalangeal Fractures 43
- Role of JESS in Metacarpal Fractures 46
- JESS for Postburns Contractures of the Limbs. 50
- Tissue Salvage by Early External Stabilisation in
Mutilating Injuries of the Hand. 58
- Management of Mutilated Hands. 60
- Fractional Distraction for Soft Tissue Correction of
Radial Club Hand. 65

CHAPTER VII

JESS - An overview of Clinical Uses

- Frames for Hand and Wrist 67
- Paralytic Complex Deformity of Hand 76
- Non-Osseous Applications 78

CHAPTER VIII

JESS - Care of the Frame and General Principles of Post Fixation Management

- Care of the frame 79
- Elevation 79
- Dressings 79
- Mobilisation 80
- Frame removal 81

APPENDIX I

- List of Illustrations 83

APPENDIX II

- Scientific Papers Published by Dr. B.B. Joshi 89