

Prevention of the development of the deformity is best and is done by early splintage and exercises³. Surgery as tendon procedure is done for the secondary deformity⁴ with the joint being supple.

2. Material and Methods

A 25 year old male computer operator presented with complaints of bent left middle finger, and difficulty in performing fine tasks since 1 year. Patient had history of crush injury to left middle finger one year ago in a road traffic accident, with history of surgery of the wound on the finger and splintage for four months but there was no improvement. Patient was doing regular physiotherapy. On examination there was scar on the dorsal aspect of left middle finger over the area of proximal phalanx with the finger in Boutonniere's deformity. There was limitation of extension at proximal interphalangeal joint and of flexion at the distal interphalangeal joint. Both the joints were supple (Figures 1 & 2). X-ray of the left hand showed the joint spaces of the Interphalangeal joints of the Left Middle finger to be normal (Figure 3).

3. Our Technique

Under tourniquet control and left Axillary nerve block, zig-zag incisions were made on the dorsum of left middle finger (Figure 4). Skin flaps were raised (Figure 5). Cut end of central slip was found on proximal phalanx on its middle third with lot of adhesions to the capsule on the dorsum of proximal interphalangeal joint (Figures 6,12, 13). Adhesions on the dorsum of proximal interphalangeal joint were released, primary approximation of the central tendon was not possible⁴. Lateral bands were mobilized from their volar position towards dorsal side. K- wire was passed across proximal interphalangeal joint in extension (Figures 6,7).

Fascia lata graft harvested from left thigh under short General anaesthesia, while the surgery was underway on the left middle finger. Fascia Lata graft was passed through a hole drilled transversely across the base of Middle Phalanx (Figure 6) and brought in a "U" shaped fashion and then sutured to the cut proximal end of central slip found lying near the base of proximal phalanx, and thus eventually the continuity of Central extensor tendon to the base of middle Phalanx was obtained, bridging the three centimeter defect. Lateral bands after mobilization were sutured to the fascia lata graft for centralization (Figures 8, 14, 15). Tourniquet was removed. Skin flaps were sutured after securing haemostasis (Figure 9). Post-operatively Plaster of Paris splint was applied placing the hand in neutral position. Sutures were removed at the end of two weeks (Figure 10). Splint and K-wire were removed at the end of three weeks (Figure 11). Physiotherapy was continued. On follow-up, at the end of three months, patient was quite satisfied with the functional recovery (Figures 16,17,18, 19, 20).

4. Discussion

Boutonniere's deformity is a rarity in our set-up. Splintage with physiotherapy failed to correct the deformity and surgery was needed⁴. Procedures like Tenotomies⁵, Lateral band transfer^{1,6}, Tendon transfer have been described to correct the Boutonniere deformity. The deformity has been corrected using the fascia-lata graft along with pre and post-operative physiotherapy to utmost satisfaction of the patient. Palmaris longus was not present on clinical examination on the left wrist. The right sided Palmaris longus graft was not tried.

The graft was used as figure of "U" to bridge the defect, unlike the usage by Littler in the form of figure of "eight",⁸ to prevent the tension on closure of the skin flaps. Usage of Tendon graft for correction of Boutonniere deformity is rare and that of usage of Fascia lata is not reported in the literature.

5. Acknowledgement

I thank my Professor Dr. Siril Satyanandam, my colleagues Dr. P.Ramesh, Dr. G. Rangaswamy for their advice during the preparation of this paper. I thank my Postgraduate Dr. Kiran for helping me in the preparation of this paper.

6. Conflicting Interest: None

7. Prior Publication: Not done

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