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Medi Quest BRS Hospital

A monthly News letter from BRS Hospital

POST BURN CONTRACTURE HAND

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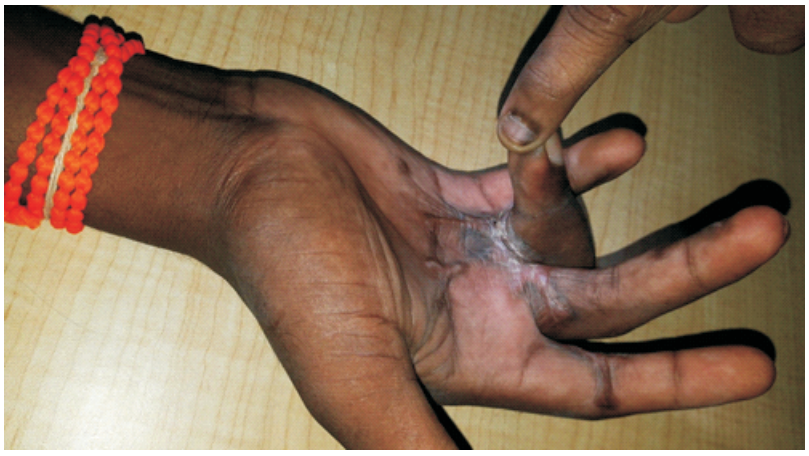
Post burn scar contracture of the hand is one of the common deformities following a burn injury. The acute phase of a burn injury involving the hand should be managed by proper splintage in the functional position and early physiotherapy. Surgical intervention must be done wherever indicated. Post burn deformities of the hand can be reduced by proper care during the acute phase. The outcome of treatment should help in improving the functions of hand and be aesthetically acceptable.

CASE REPORT

Mr. Vijay aged 24 yrs, a case of post electric burn contracture, involving the right middle and ring finger, was seen at the outpatient clinic, with c/o inability to extend the mid and ring finger of the right hand. Clinical examination revealed a post –burn scar and flexor contracture involving the right middle and ring finger and Capsular Contracture involving PIP joint of middle finger.



Pic (1) - Contracture right Mid & Ring finger.

TREATMENT :

Stage I - Post Burn Contracture release and groin flap cover to the right mid and Ring finger Capsulotomy of **PIP** it of mid finger.

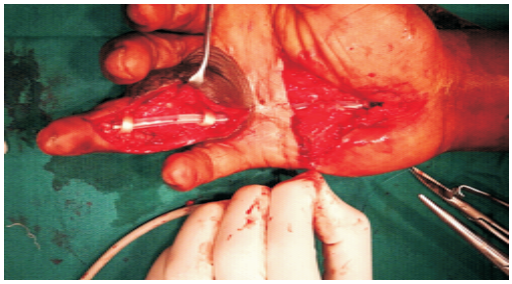
Stage II - Groin flap Division and Inset after 2 weeks.

Stage III - Staged Flexor Tendon reconstruction Insertion of silastic Rod and pulley reconstruction to right mid finger.

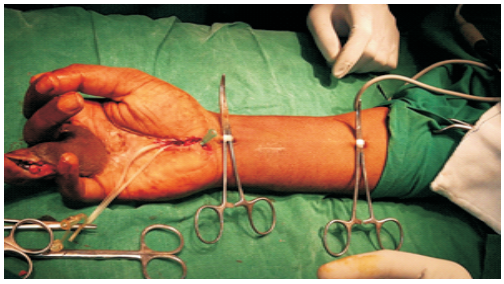
Stage IV -Removal of silastic Rod and flexor Tendon reconstruction with Palmaris Long us Tendon graft.

Stage V - Hand was immobilised in a Splint for 4 weeks after Tendon reconstruction commenced on a Physiotherapy regime after removal of splint.

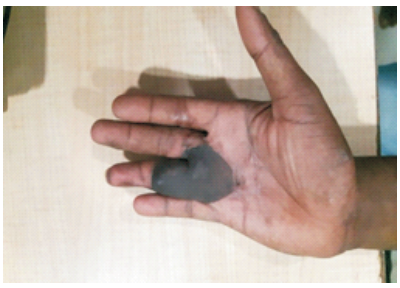
Follow up after 3 months showed a good range of flexion and extension of middle and ring fingers of the right hand.



Pic (2): Flexor Tendon Reconstruction – Stage I (SILASTIC ROD)



Pic (3) – Flexor Tendon Reconstruction - Stage II (PALMARIS LONGUS GRAFT)



Pic (4) – Groin FLAP IN SITU

DISCUSSION

CAUSES OF BURNS INVOLVING THE HAND

- Ø Thermal Burns
- Ø Electrical injury
- Ø Camphor Burns (associated with religious Practices)
- Ø Industrial accidents

BURN INJURY OF HAND IN CHILDREN

- Ø Contact Burn (Hot Plate, iron, radiator fire place) – 67 %
- Ø Low voltage electricity - 13 %
- Ø Hot liquids - 4 %

HAND DEFORMITIES (POST BURN)

- Ø Dorsal Hand Deformities
- Ø Volar Deformities
- Ø Deformities of Thumb
- Ø Swan Neck Deformity
- Ø Bou to nniere Deformity
- Ø Syndactyly
- Ø Loss of Digits

Classification of post Burn Hand Deformities by Mc Cauley

Grade I - Symptomatic tightness but no limitations in range of motion, normal architecture

Grade II - Mild decrease in range of motion without significant impact on activities of daily living, no distortion of normal architecture.

Grade II - Functional deficit noted, with early changes in normal architecture of the hand

Grade IV - Loss of hand function with significant distortion of normal architecture of the hand

Subset classification for Grade III and Grade IV contractures: A: Flexion contractures, B: Extension contractures, C: Combination of flexion and extension contractures.

TREATMENT TO THE ACUTE PHASE

- Ø Deep Burn is treated by skin Grafting
- Ø Appropriate Splintage
- Ø Physiotherapy
- Ø Appropriate Antibiotics
- Ø Wound Care

SUMMARY

Functions of Hand which include the ability to grasp objects and pinch must be restored for a good outcome. Burn deformities occur due to skin loss and due to secondary changes in the joints and musculotendinous units. Assessment of the deformity is very crucial for planning the treatment. The final outcome should enable the thumb to oppose the tips of finger, fingers to be straight and MCP joints to achieve flexion. Reconstruction involves skin graft or skin flaps depending on the depth of tissue loss and exposure of tendon or joints.

For a Successful outcome, proper post operative care (splintage, krischner wire fixation) and the assistance of a good physiotherapist is required.

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1.Management of post burn hand deformities Indian Journal of Plastic Surgeon 2010 Sep: 43 (suppl) 572 – 579
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2. Treatment of Palm Burns in Children Ann Burns Fire Disasters: 2005 Dec 31; 18 (4): 190 - 193

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90th BIRTH ANNIVERSARY (25.10.2018) CELEBRATION OF Prof. B.R.SANTHANAKRISHNAN Founder - BRS HOSPITAL

The students of Gnanadarshan Seva Foundation who are visually impaired were honoured at the event by our Chairman Prof. Dr.B.S Gajalakshmi BRS Hospital Research, Educational & Charitable Trust

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