LETTER TO THE EDITOR

Managing Post-Hansen’s Muscular Wasting of the 1st web: Using spare part surgery

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Sir,

India is considered the point of origin of leprosy and still it is endemic in India. Disease is readily treatable with available multi-drug therapy but unsightly deformity and disfigurement contributes to strong social stigma.

The 1st web space guttering being an important visual marker of leprosy, is one of the deformities of it which has significant psychological stigma in cured patients. Most noticeable wasting is found between the thumb and index metacarpal due to palsy of the Adductor pollicis and 1st dorsal interossei supplied by the ulnar nerve. To offer physical and psychological benefits to cured patients a variety of methods using both Autologous and synthetic materials have been tried. In 1981, Harahap inserted a skin graft taken from the lateral aspect of the buttock in a surgically created pocket in the wasted area. Johnson H.A. had used a large dermis graft but this resulted in a large scar. Other fillers used are silicone sponge/liquid, rubber prosthetics, Polymethylmethacrylate (PMMA) as injectable filler implants. But Autologous fat being abundant, inexpensive, host compatible and easily accessible is still the ideal filler. Hand rejuvenation with Autologous fat grafting continues to be the most safe and effective procedure. Reports of this use of fat for post-Hansen’s contour deformity of the hands are sparse in literature.

At present, the lower abdomen and inner thigh are better and more common donor sites for fat harvesting. Though tumescent anaesthesia is advocated, short general anaesthesia is used to reduce pain and anxiety. Blunt atraumatic fat grafting cannulas is the preferred method of choice for fat graft harvesting. After processing it is injected at the recipient site. This necessitates violating a different body area, and might require the administration of general anaesthesia.
Johnson proposed correcting the contour deformity of the hand hollows using dermal grafts as the last stage. He believed that the motor aspects of the hand should be reconstructed, and of proven function before contour correction should be attempted. We believe in achieving the best for the patient in terms of functional and social needs with minimal interventions. We have attempted contour deformity correction of the 1st web space at the time of tendon transfer using Autologous fat with positive outcomes.

The appropriate tendon transfer for the particular patient is performed. We routinely perform dermadesis as the last step of any tendon transfer for clawed hands to remove the excess skin after MCP flexion. This excised segment of skin is deepithelised, and the available fat is inserted through a stab incision for contour correction of the 1st web. The amount of fat available depends on the amount of strip excised during dermadesis, and is almost always insufficient to fill the entire hollow. However, it does manage to correct the contour deformity to a great extent. The stab is closed with a single stitch. The post operative protocol is the same as followed for all tendon transfers. The hand is kept in cast for 3 weeks after which physiotherapy is initiated.

This procedure uses extra fat which would have been discarded to correct the deformity. The procedure is performed in the same area, in the same tourniquet time without the need to violate other areas. We present our preliminary report in two patients (Figures 1 to 4- pre-op, intra-op and post op).
Although it is difficult to quantify the outcomes in these cases; the patients are happy with the outcomes. By using fat from dermadesis we are giving the best results from waste material.

One of the important limitations for this procedure is that the quantity of fat which is available is dependent on the strip of dermadesis, and may not be adequate to fill the entire hollow. However, whatever fat is available it does give a noticeable improvement in the aesthetic outcomes.

Our preliminary results are encouraging. However long term outcomes, especially regarding fat resorption, need to be assessed to ascertain validity of this procedure.

References