Umbilical Reconstruction After Repair of Large Umbilical Hernia: The “Lazy-M” and Omega Flaps

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A simple and easy-to-perform technique of umbilical reconstruction after repair of a large umbilical hernia is described. Two opposing skin flaps, an upper inverted Omega shaped flap, and a lower, lazy M-shaped flap were designed to create a deep, 3-dimensional, normal-appearing umbilicus in identical twins.

INDEX WORDS: Umbilical hernia, umbilical reconstruction, skin flaps.

UMBILICAL HERNIA is a common finding in infants. Most resolve spontaneously with time and need no surgical intervention because of a very low complication rate.1 However, in larger-sized protruding hernias, the aesthetically unpleasing residual redundant skin that usually follows calls for surgical reconstruction. Many techniques have been described to restore the navel, including combinations of local flaps, skin grafts, and cartilage in various degrees of umbilical absence,2-6 but few addressed the particular situation of a protruding large umbilical sac.

We describe the repair of a large congenital umbilical hernia in identical twins. The umbilicus was reconstructed with a technique of the so-called opposing Lazy M and Omega flaps, with a satisfactory outcome.

MATERIALS AND METHODS

Identical twin boys were born with protruding large umbilical hernias present at birth. After 34 weeks of spontaneous pregnancy, because of maternal hypertension, one of the twins was born after a simple delivery and the other one after a cesarian section, with birth weights of 2,450 and 2,540 g, respectively. Otherwise healthy, the twins were presented to our care at the age of 2.5 years for repair of the unappealing hernias. There were no events of hernia incarcerations, and no need for surgical intervention because of a very low complication rate.1 However, in larger-sized protruding hernias, the aesthetically unpleasing residual redundant skin that usually follows calls for surgical reconstruction. Many techniques have been described to restore the navel, including combinations of local flaps, skin grafts, and cartilage in various degrees of umbilical absence,2-6 but few addressed the particular situation of a protruding large umbilical sac.

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RESULTS

Figure 3 shows the immediate postoperative view. On 6-month follow-up, the healing process and aesthetic outcome were pleasing, natural-appearing navels were created, and the parents were satisfied with the end result (Fig 4A & B).

DISCUSSION

Although many techniques have been proposed to reconstruct a new umbilicus, only few have addressed the formation of such after repair of protruding umbilical hernias of infants.3,4 Most of the literature considering this topic refers to large abdominal wall defects such as omphalocele and gastroschisis,7-10 in which tissue is rather insufficient. In this particular clinical situation of protruding hernias, which normally resolve with no need
to operate,^1^ unpleasing redundant skin ensues in cases of large bulging sacs. The use of local flaps is well versed in umbilical reconstruction, and either skin flaps, skin and cartilage grafts, or combinations of these were already described in various clinical circumstances of umbilical absence.\(^2^,^5^,^6^,^11^-^13^)

In the unique incident of identical twins presenting with almost a similar defect, the technique could be checked and improved instantly. Both operations were performed subsequently, and the first patient has had a larger sac (the right patient in Fig 1A and 4A). The lateral edges were minimally trimmed, and the scars became somewhat twisted and extended beyond the dimple margins. The second patient exhibited a smaller sac, and the redundant lateral edges were excised in a circular fashion toward the base of the M arms and tucked in for a better cosmetic result.

The Lazy M and inverted Omega flaps described here offer a simple, easy-to-plan and easy-to-use technique

![Fig 1. Preoperative view of large umbilical hernias in identical twins.](image)

![Fig 2. (A) Inferior M-shaped figure drawn on the empty sac. Note that the curve of the M is semicircular to match the opposing flap. (B) An inverted Omega-shaped figure is drawn at the superior part of the sac. In case of a broad sac, its arms should curve downward to meet the legs of the lower M figure.](image)
with predictable aesthetic result. Creation of a normal-looking navel with a good morphology and a 3-dimensional lasting structure with sufficient depth is the goal.\textsuperscript{14}

The umbilicus is an important aesthetic detail in the abdominal wall; it is expected and accepted and creates a balance between the sides and the upper and lower parts of the midbody.\textsuperscript{15} In the technique described above, we find that these goals are met.

REFERENCES