

A Simple Device to Prevent and Treat Umbilicus Stenosis

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Received: 31 July 2012 / Accepted: 29 November 2012 / Published online: 9 January 2013
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Despite its apparent simplicity, umbilical reconstruction is often associated with complications such as unsightly scars, cicatricial ring formation, umbilical stenosis, malpositioning, and aesthetically displeasing shapes [1–3]. Round-incision umbilicoplasty seems to predispose the new scar to retraction and stenosis more than does a discontinuous incision, but even when a “triangular flap” technique is used and the flap is fixed to the rectus fascia, we cannot always avoid complications because of the unpredictable nature of skin healing and scar remodeling processes. The incidence of cicatricial stenosis following umbilicoplasty is as high as 4.5 % [4].

In an attempt to prevent or treat early umbilical stenosis and loss of depth, we propose a simple nonsurgical procedure that involves the use of a marble. The umbilicoplasty

technique we use is the inverted “V” or “U” method. Once the umbilical sutures are removed, about 3 weeks after surgery, and only after the umbilical skin is completely healed, we suggest that the patient insert a marble into the umbilical depression. Due to its spherical shape and availability in different sizes, a marble can fit the neoumbilicus exactly, keeping it slightly dilated. Long-lasting effects are guaranteed if the marble is left in the umbilical depression 24 h a day for 2 months (Fig. 1). The key innovation of this technique is that the hardness of the marble exceeds that of other stenting devices [5], keeping a constant dilation that does not decrease over time.

With the marble, the scarring process is improved in both umbilicus repositioning and umbilicoplasty. Personal hygiene poses no problem because the marble can be removed and cleaned daily. It is kept in place by means of a small adhesive plaster, placed alternately horizontally and vertically to avoid any skin irritation.

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Fig. 1 Marble placed in the umbilical fold 3 weeks after the umbilicoplasty in a breast reconstruction with DIEP flap



Fig. 2 Appearance of the neoumbilicus after daily use of the marble

We have used this simple marble technique with more than 200 patients treated at our plastic surgery department. No skin problems, necrosis, infection, or scar hypertrophy has been reported to date (Fig. 2). No patient has complained of pain or difficulty in inserting or removing the device, nor have they found it uncomfortable.

Once the marble has been removed after 2 months, the scar remodeling process continues for the whole first year, by which time the umbilicus has a small, vertical shape yielding high levels of patient satisfaction.

Conflict of interest The authors have no conflicts of interest to disclose.

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