LETTER

Seroma Reduction: Using Barbed Sutures (V-Loc) to Close Latissimus Dorsi Donor Sites

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Dear Editor,

We note with interest the recent article by Thekkinkattil et al. [1] studying the feasibility of the barbed suture (BS) (V-Loc) to close latissimus dorsi donor sites (LDD). Their seroma rates were fairly high (33% in the BS group) compared with the recently published literature [2,3], although they did not demonstrate any statistical difference with traditional interrupted quilting. The higher than expected seroma rates may well reflect the fact that a significant number of their patients underwent complete autologous breast reconstruction (29 out of 30) in the immediate reconstruction group; however, this was not clearly elucidated. As for the delayed reconstruction patients, this same critical point was again not clearly highlighted and no firm conclusions can be made. Complete autologous breast reconstruction with latissimus dorsi flaps (LD) tends to be reserved for patients with smaller natural breasts, if harvested in a non-extended manner. Extended LD flaps, on the other hand, require a much more extensive dissection by virtue of the technique, in order to increase the flap size. Hence, it is unsurprising that the seroma rates were increased with this technique [4]. Despite this omission of relevant information, Thekkinkattil et al. [1] have commendably demonstrated that the barbed suture is a very viable alternative to traditional quilting methods when used to close LDD.

We recently reviewed our own LDD data in our unit from January 2005 till the present, having started using the V-Loc suture since January 2010. Before 2010, 31 patients underwent conventional closure of LDD with interrupted quilting sutures using 2.0 polyglactin (Vicryl) sutures (Ethicon, Johnston & Johnston, Livingston, Scotland) according to the technique described by Titley et al. [5]. Seventeen developed clinical seromas (55%), with volumes varying from 20 to 800 mL in total on aspiration. Most had minimal volumes, and only 7 patients had more than 50 mL aspirated in total. In the BS group of 42 patients (8 patients with bilateral LD flaps), only 2 patients developed a seroma (40 to 70 mL) i.e., 2/50 (4%). This represents a highly significant seroma reduction ($P = 0.0001$; two-tailed Fisher's exact test). Both groups were similar in terms of age, body mass index, delayed/immediate reconstruction, autologous or implant-based reconstruction, and axillary lymphadenectomy. All patients were operated on by the senior author, with harvest of the flap using standard monopolar cutting diathermy.

The striking difference in the seroma rate has prompted us to change our practice and adopt the BS on a regular basis when quilting LDD. The reason for such a reduction in the seroma rate is unclear but may well be related to at least 3 differences compared with traditional quilting: firstly, the spread of the suture 'bites' are noticeably closer together compared with traditional quilting, as the tension on the suture is not exacted until a few tissue passes have been made. This is clearly different from interrupted quilt stitches that must be tied off immediately, making suture placement more difficult than with the continuous technique. Secondly, the continuous nature of the quilt makes cheese-wiring through tissues more difficult. Thirdly, the nature of the barbed suture allows better distribution of tension throughout the apposed tissues. All these factors suggest that the tissues will necessarily be apposed better, reducing dead space and shear. Traditional interrupted quilting is very operator dependent, which may account for our high seroma rates in our patients (pre-2010). We believe that in our practice, the BS technique is easier to perform than traditional quilting, reduces seroma formation, and is an excellent alternative for LDD closure.

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