

We have performed an anatomical study to reveal the vascular anatomy of the metacarpal bones and the interosseous muscles.<sup>2</sup> In our study we have found out that the dorsal metacarpal arteries (DMA) were present in all of the webs and we have revealed that they were closer to the radial side of the metacarpal bones. This fact could also be seen in the authors' paper especially in Figure 8 in the second web. In addition, we have described the bifurcation of the DMA at the level of metacarpal head, which the authors presented as new. We have described a myoosseous flap proximally or distally based depending on the distal intermetacarpal anastomoses between dorsal and palmar vascular networks which were described in a detailed manner in literature.<sup>3-6</sup>

In literature, there were no detailed studies about the vascular anatomy of the dorsum of the hand and especially the vascular anatomy of the hand and the interosseous muscles were not evaluated before. Weinzweig examined the vascular anatomy of the lumbrical and interosseous muscles and offered a physiologic mechanism in the etiology of the intrinsic tightness encountered following transmetacarpal replantations and revascularisations.<sup>7</sup> The utilisation of the dorsal metacarpal flaps including any kind of tissue enabled reconstruction of the hand without microsurgery. The marvellous clinical study presented by the authors should be appreciated. As they have mentioned 'We undertake a critical review of the literature, highlighting the sequence of developments in the knowledge of relevant anatomy and various flap designs as distally based dorsal hand flaps since their first popular report in 1990', we would prefer them to review the literature more carefully especially for their anatomical study.

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## Preliminary evaluation of the efficacy of Dermatrix silicone gel in the reduction of scar elevation and pigmentation

Silicone gel sheeting has been used as an effective treatment for hypertrophic and keloid scars since the early 1980s.<sup>1</sup> It appears to be effective because it increases hydration of the stratum corneum and scar tissue and provides mechanical and bacterial protection.<sup>2</sup> The altered hydration is thought to cause electrostatic changes which influence collagen deposition and remodelling within the scar.

We report here the results of a small pilot study aimed at establishing the efficacy of Dermatrix (Valeant Pharmaceuticals Ltd), a self-drying silicone gel, in reducing the elevation and pigmentation of scars.

## Materials and methods

Six subjects aged between 30 and 58 were recruited to the study. All the scars were mature, raised and red. The age of the scars was as follows, one scar was 3-6 months, four scars were 2-4 years and one scar 4-5 years old.

Each subject was issued with a tube of Dermatrix gel and asked to apply the gel in accordance with the manufacturer's instructions. Subjects applied the gel morning and night over an 8-week period

and were asked to complete a compliance sheet recording gel application.

To measure the efficacy of treatment, we used a three-phase assessment tool comprising:

1. Patient and clinical assessment using an adaptation of the Vancouver scar scale to measure improvements, on a scale ranging from 0 to 3, in redness, elevation, hardness, itchiness and tenderness or pain.
2. Comparison assessment using digital photography.
3. Objective assessment using a spectrophotometric intracutaneous scope (SIA scope).

Patients were evaluated after 8 weeks continuous application of the Dermatix gel.

## Results and discussion

Evaluation of the patient compliance sheets indicated a 96.4% compliance with the twice-daily application; patients stated that occasional omissions were made due to forgetfulness. No adverse effects were recorded by any of the subjects at any time during the 8-week study. All subjects indicated that tolerability was very good. The improvements obtained were satisfactory in all subjects studied. In terms of efficacy, three subjects scored 'very good', two subjects scored 'moderate' and one subject scored 'good'.

The results of patient and clinical assessment using the adapted Vancouver scar scale showed that all subjects improved on all parameters (Table 1). Some of the best improvements were reductions in itching (four patients improving by 2.0) and hardness (one patient improving by 2.0, two by 1.5 and three by 1.0).

## Comparison assessment

We found assessment of any changes in the scars using photography difficult and did not obtain any meaningful data. This was due principally to the changes in skin tone, but also to the variability in assessment.

## Objective assessment

The SIA scope is a noninvasive technique which is used to image skin lesions. It generates eight narrow band spectrally filtered images of the skin over an area of 24 mm × 24 mm which can be

**Table 1** Improvement in measured scar parameters after treatment with Dermatix

Parameter	Improvement	Number of subjects
Redness	0.5	3
	1.0	2
	1.5	1
	2.0	0
Elevation	0.5	3
	1.0	3
	1.5	0
	2.0	0
Hardness	0.5	0
	1.0	3
	1.5	2
	2.0	1
Itching	0.5	0
	1.0	2
	1.5	0
	2.0	4
Tenderness	0.5	1
	1.0	3
	1.5	0
	2.0	0

Note: two patients had no tenderness or pain before the trial.

used to look at collagen content, blood supply, pigment and depth of pigment. We were unable to obtain results for all subjects due to a poor scan in one subject. The results from the other subjects studied showed a consistent reduction in collagen in the scar, with an average drop of 7.2% over the 8-week period. Blood flow was also consistently elevated, with an average elevation of nearly 3%.

The results of this pilot study demonstrate that Dermatix is effective in reducing scar elevation and pigmentation through reduction in collagen deposition and elevation in blood flow. All patients reported that treatment was painless and the gel was simple and easy to apply providing early relief of symptoms. Further studies with larger numbers of patients are now warranted.

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### Learning model for palatal closure<sup>☆</sup>

Suturing skills have importance in the final outcome of palatal closure. We describe here a simple model for training in palatal closure. Other alternatives (animal, cadaver, or any of the various synthetic models) are expensive and scarce. This model can however be easily arranged in any university setup having a medical and a dental school. The phantom head that can be mounted on a tabletop is available in prosthodontic laboratories.

### Phantom head model

A phantom head with mounted upper and lower arch (typodont teeth fixed) Fig. 1. Rubber dam sheet (green colored latex sheet used in dentistry to separate teeth from oral cavity to be used as an oral layer) with rubber dam puncher. Latex surgical gloves (with yellowish white color that gives contrast, to be used as nasal layer) and sponge (to



Figure 1 Phantom head model.



Figure 2 Rubber dam and cut portion of gloves with sponge incorporated in middle.

simulate the muscles interposed in the region of soft palate) Fig. 2 with other necessary instruments are required.

The rubber dam sheet is punched with corresponding holes according to the size of teeth and in the maxillary arch form; the same is done to the cut portion of surgical gloves. The small piece of sponge is incorporated and stuck with light glue in between the layers. Sheets are passed around the teeth corresponding to the punched holes, gloves sheet first and rubber dam on top Fig. 2. The upper arch is now fixed to the phantom head base and phantom head mounted over table top according to the position of the operator; Dingmans retractor can be applied to the model Fig. 3.

Paring incisions and lateral incisions are placed; one can simulate dissection of muscle by dissecting over the sponge in between layers Figs. 4 and 5. Buried sutures are passed over for the nasal layer

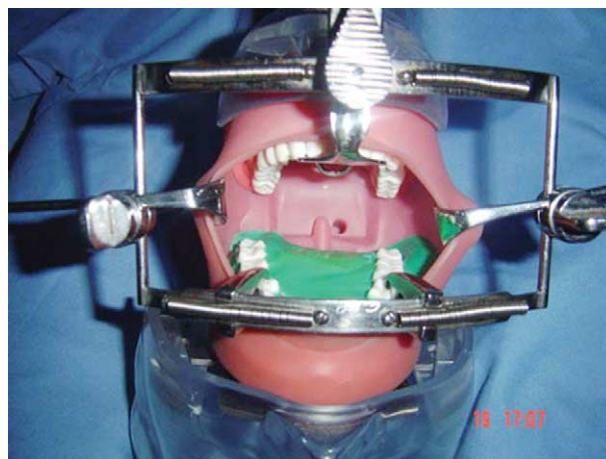


Figure 3 Complete model fixed over table top with Dingmans retractor in place.