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Technical note

Simple technique to minimise facial scarring during extraoral mandibular distraction

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External mandibular distraction devices produce considerable distress for patients until they are removed, and can cause appreciable facial scarring. Extraoral distractor pins tear the skin and subcutaneous planes while moving through the skin during the active stretching period. This movement causes unpleasant scars, which are accepted as the main disadvantage of extraoral distraction.[1] Scars are even getting larger now some brands of distractor use double pins to stabilise each osteotomy or stump.[2]

Fig. 1. The skin is folded among the extraoral distractor pins (Molina Unidirectional Distractor, KLS Martin, Tuttlingen, Germany) to avoid unnecessary pin-related scars.

Pin-related facial scars are always conspicuous and often hypertrophic, and we use a simple method to reduce their size. When the proximal or distal pin is placed, we grab the skin, squeeze it with the fingers, and make the second transcutaneous incision for the next pin. The skin is therefore contracted as much as possible and an appreciable amount of tissue is folded between the pins (Fig. 1). Folding the skin among the pins saves a considerable length from tearing during the lengthening period (Fig. 2). It also prevents unnecessary tearing of skin and the formation of scar tissue is minimised (Figs. 3 and 4).

The amount of skin that is pinched depends on the elasticity of the skin. We have not measured it particularly, but have

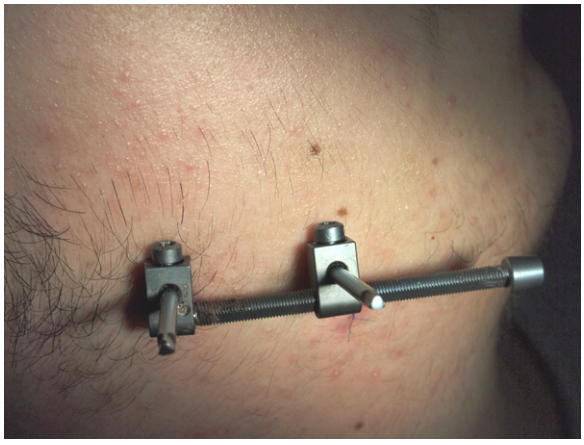

Fig. 2. Almost no scarring occurred after distraction.

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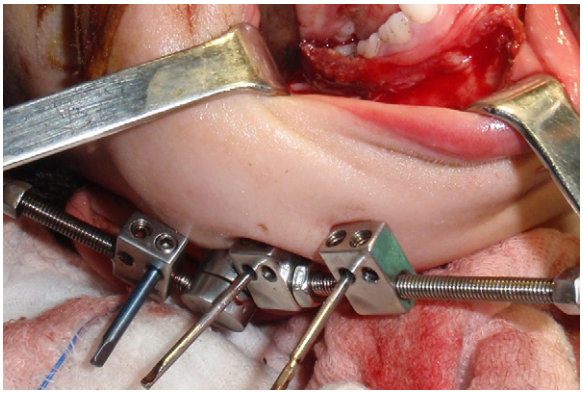

Fig. 3. The skin is pinched as much as possible among the three pins of a bidirectional distractor placed in a 7 years girl treated for sleep apnea due to TMJ ankylosis and mandibular micrognathia.

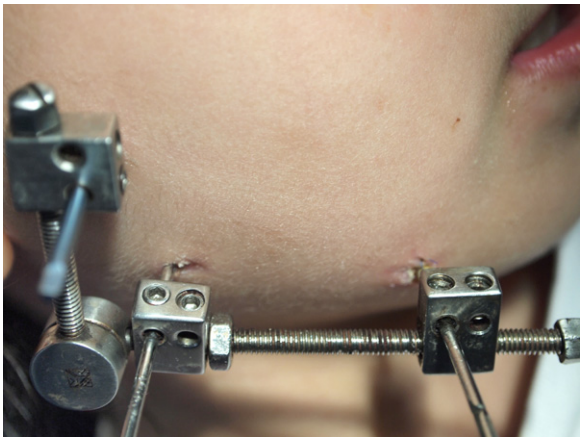

Fig. 4. Excellent stretching achieved with minimal scarring. Scars will develop only where the skin is penetrated.

noticed that at least 2–2.5 cm of lengthening without scarring is possible with this technique.

References

1. Rachmiel A, Aizenbud D, Eleftheriou S, Peled M, Laufer D. Extraoral vs. intraoral distraction osteogenesis in the treatment of hemifacial microsomia. *Ann Plast Surg* 2000;**45**:386–94.
2. Basa S, Uner E, Citir M, Aras K. Reconstruction of a large mandibular defect by distraction osteogenesis: a case report. *J Oral Maxillofac Surg* 2000;**58**:1425–8.