

Forehead pressure sore following a prolonged operation and the role of the Mayfield head frame in re-operation

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To the Editor:

Appropriate intraoperative patient positioning by surgeons and anaesthetists is essential to prevent pressure sores. Facial pressure sores are rare, and their occurrence is possibly underreported [1]. We report a unique case of a stage 2 forehead pressure sore developing after a 21-h operation in the prone position despite full anesthetic precautions, and we advocate use of the Mayfield head frame to prevent deterioration if re-operation is required in the prone position in such scenarios.

A 43-year-old overweight gentleman with sacral chondrosarcoma and no other significant medical history underwent hemisacrectomy and two-stage reconstruction with a free latissimus dorsi musculo-osseo-cutaneous flap. He was intubated and lay in the prone position for the duration of the second-stage reconstruction. He was placed on a cami table, with full padding precautions and a head ring. The total duration of the operation was 21 h.

Postoperatively the patient was noted to have a 4 × 2 cm grade 2 forehead pressure ulcer (Fig. 1).

The patient returned to the operating room for an exploration of the free flap following an absent venous Doppler signal, although clinically the flap appeared viable. On this occasion he was placed in a Mayfield head frame to avoid further pressure on his forehead sore. Intraoperatively the flap was indeed viable, but the internal venous Doppler revealed it required repositioning. This procedure took 2 h. The forehead pressure sore was unchanged postoperatively as a result of the avoidance of pressure on it and the shorter operative period. It was subsequently treated conservatively with regular dressings and healed 2 months later.

In our case, the Mayfield head frame was utilized when the patient was taken back to the operating room for flap exploration in the prone position to avoid further facial tissue compromise. This frame is generally used for head stabilization during intracranial surgery. However, there have been reports of hematomas following its use if placed against anatomically thin bone (such as the squamous part of the temporal bone) or pathologically thin bone (as can happen after chronic intracranial hypertension) [2, 3]. Goodwin et al. [4] believe the use of the head frame prevents the development of facial pressure sores in patients undergoing sacrectomy.

Facial pressure sores can cause much physical and emotional morbidity, adding to the already appreciable healthcare costs of treating these patients. As the number of prone cases in surgery increases, it is crucial to recognize all patients at risk and to address all contributory factors, particularly if prolonged procedures are anticipated. Established methods to reduce facial pressure sore development include widening of the facial-pillow contact area to disperse the pressure, checking facial skin status frequently, and changing head position regularly (when the

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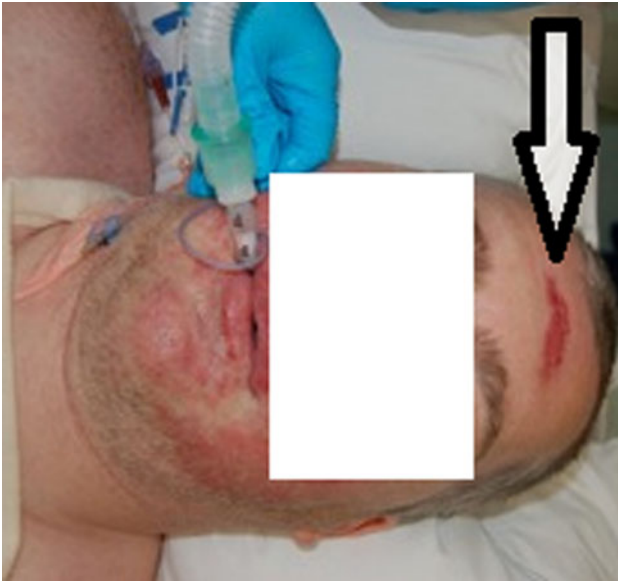


Fig. 1 Grade 2 pressure sore on the forehead (*arrow*) noticed once the patient was turned from the prone position into the supine position at the end of the procedure (the patient's mid-face has been censored in *white*)

head does not need to be fixed intraoperatively). However, we believe it is important to equip surgeons and

anesthetists with knowledge of the potential role of the Mayfield head frame to prevent facial pressure sore development or deterioration in the prone position, especially when more conservative measures have failed in high-risk patients undergoing prolonged procedures.

Consent the patient consented to his pictures and information being used for publication (John Radcliffe Hospital Form 1).

Conflict of interest None.

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