On-line Case Report

Tattooing and the risk of wrong-site ear surgery

I SROUJI, P PRINSLEY

ENT Department, Norfolk and Norwich University Hospital, Norwich, UK

Wrong-site surgery could occur in cases of bilateral pathology or in patients with normal tympanic membranes such as those undergoing stapedectomy. This report highlights the pitfalls in current surgical checklists despite best efforts being put into their design. The practice of marking the earlobe in ear surgery may be less safe than using larger arrows on the neck to indicate the side of surgery.

Keywords: Wrong-site surgery – Tattooing – Ear surgery

The World Health Organization (WHO) carries out a number of global initiatives to improve patient safety. A recent project was the *Safe Surgery Saves Lives* initiative which was launched in June 2008 and focuses on the *WHO Safe Surgery Checklist*.¹ The checklist is designed to

help healthcare professionals minimise common and avoidable errors which risk the lives and well-being of surgical patients. It describes three phases of an operation, each corresponding to a specific stage of the patient journey: (i) before anaesthetic induction ('sign in');

Figure 1 Arrow drawn near left mastoid process using a permanent marker pen to indicate the site of surgery.

Figure 2 Irregular floral tattoo on right ear lobe

Correspondence to: Mr I Srouji, ENT Department, Norfolk and Norwich University Hospital, Colney Lane, Norwich NR4 7UY, UK
T: +44 (0)7710 856973; F: +44 (0)1473 703576; E: ibs@doctors.org.uk

(ii) before skin incision ('time out'); and (iii) before the patient leaves the operating theatre ('sign out'). In each phase, the designated checklist co-ordinator confirms that a list of tasks has been completed before proceeding to the next stage. One of the tasks during the 'sign in' stage is checking whether the surgical site on the patient's body was properly marked. We have recently come across a noteworthy situation in routine ear surgery where even strict adherence to the WHO checklist or other locally agreed checklists may not be error-proof.

Case history

A 43-year-old woman attended our department for a left tympanoplasty under general anaesthetic. On pre-operative review, a small arrow was drawn near her left mastoid process using a permanent marker pen to indicate the site of surgery (Fig. 1). On arrival in the anaesthetic room, we noted that she had an irregularly shaped floral tattoo on her right ear lobe (Fig. 2), resembling a permanent pen mark and in a location that is also routinely used to indicate the site of surgery. This

tattoo was a potential risk factor for incorrect site surgery; it may have led to antiseptic preparation of the opposite ear and unnecessary infiltration with local anaesthetic and adrenaline until visualisation of the tympanic membrane before the error was discovered.

Discussion

A worse scenario of actual wrong-site surgery could occur in cases of bilateral pathology or in patients with normal tympanic membranes such as those undergoing stapedectomy. This scenario highlights the pitfalls in current surgical checklists despite best efforts being put into their design. It is also arguable that the practice of marking the earlobe in ear surgery may be less safe than using larger arrows on the neck to indicate the side of surgery.

Reference

1. World Alliance for Patient Safety. *WHO Surgical Safety Checklist and Implementation Manual*, 1st edn. Geneva: WHO Press, 2008.