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Clinical audit of outpatient tissue expansion complications

We retrospectively audited complications following outpatient tissue expansion in our unit for a four year period from 1994 to 1998. Sixty-one patients underwent tissue expansion during this time, excluding those performed for breast reconstruction. Using published series^{1,2} as a standard for complication rates we found that we had a major complication rate of 11% (7/61) and a minor complication rate of 39% (24/61). Major complications were defined as those that altered the original surgical plan and minor complications as those cases where the planned reconstruction was still successfully performed.² Thirty-eight percentage (23/61) of cases were complicated by infection. During this period, inflation of tissue expanders was carried out on an ad hoc basis by on-call senior house officers who had simultaneous responsibilities for seeing emergency admissions

and ward cover. It was postulated that the high infection rate was caused by poor or rushed technique during expansion.

Change was implemented by training senior nursing staff in the outpatient department to perform inflation of tissue expanders. Expansion was carried out by these members of staff from 2001 onwards. The complication rate was re-audited for the first 25 cases and found to be a major complication rate of 12% (3/25) and a minor complication rate of 24% (6/25). The number of cases complicated by infection was reduced to 16% (4/25 $p < 0.05$ chi square test). This is an example of nurse led practice leading to an improved patient outcome. The audit loop was closed.

References

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