P27 Post-partum haemorrhage admissions to critical care: completing the audit cycle

A D Evans, L Rees, R E Collis
Department of Anaesthetics, University Hospital of Wales, Cardiff, UK

Introduction: Post-partum haemorrhage (PPH) remains a common cause of obstetric admissions to critical care in the UK. Our audit (May 2004-May 2006) found an association with carboprost (Haemobate™) and pulmonary oedema in PPH patients admitted to ITU. Following this, our entire major obstetric haemorrhage guidelines were revised through multi-disciplinary meetings (obstetricians, anaesthetists, haematologists, porters). Changes included revising the algorithm for uterotonics, carboprost became the last choice and the total dose restricted, early return to theatre, earlier senior input and early use of clotting factors. Our PPH admissions to ITU were re-audited (Jan 2007-Jan 2009).

Method: Using the intensive care unit (ICU) admission database, maternity patients were identified over the second two-year period. The case notes were reviewed to establish the reason for admission focusing on uterotonic use, fluid balance, blood products and the use of intrauterine tamponade balloons. The maternity database was used for denominator figures and pharmacy ordering data on total carboprost used within the department. The results were compared with the previous audit.

Results: Seven patients were admitted to ICU for PPH compared with 12 in the previous audit. With an increase in the number of deliveries, 12 160 vs 10 713, this is an absolute reduction of 51.8%. The main cause of PPH was uterine atony in four patients (57%). Our use of carboprost fell by >50% (pharmacy costs) and although three patients (43%) developed pulmonary oedema, only one received carboprost and the dose did not exceed the maximum in the new guidelines. Our hysterectomy rate fell (14% vs 35%) and 43% of patients were managed with an intrauterine balloon compared with 29% previously.

Conclusions: Revision of our major obstetric haemorrhage guidelines has resulted in a fall in critical care admissions following PPH. Pulmonary oedema due to excessive carboprost use did not occur and our hysterectomy rate also fell. Multiple changes occurred after the initial audit, after deficiencies were highlighted through route-cause analysis, but we feel that early return to theatre, early use of ergotamine and restricting carboprost, increasing the use of uterine balloon tamponades and early use of clotting factors (prior to clotting results) are all important.

References