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Routine use of tranexamic acid during elective caesarean section; a district general's experience

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Introduction

The use of tranexamic acid (TXA) to help reduce bleeding or blood transfusions is widely acknowledged, with NICE[1] recommending that TXA is offered to all adult patients undergoing surgery, where moderate blood loss is expected. In addition the WOMAN[2] trial also supports its use within the obstetric population, for patients with postpartum haemorrhage.

As part of development of our enhanced recovery protocol for elective caesarean patients, we decided to introduce routine administration of TXA, 1g intravenous dose at cord clamping, for all eligible patients, from 1 January 2018.

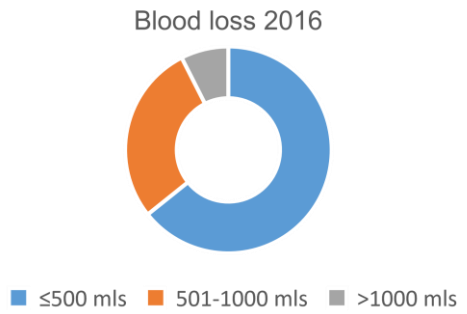
Methods

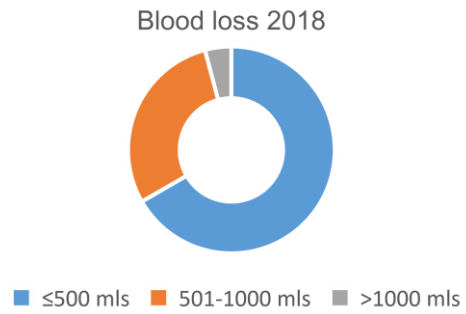
Following approval from the hospital ethics committee, we performed a retrospective data analysis of all our elective caesarean section cases during 2016 (prior to routine use of TXA) and 2018 (routine use of TXA), to ascertain if any impact on blood loss, numbers of blood transfusions or any adverse event.

Results

724 patients were evaluated, 361 in 2016 and 363 in 2018. The patient populations between years were similar in terms of numbers, age and gravida.

Despite a decrease in the mean blood loss in the intervention year (553 mL in 2018 vs 582 mL in 2016), this was not statistically significant (P=0.292)





The mean drop in haemoglobin (Hb) was also not statistically significant (P=0.402) (Table 1).

	2016	2018
Hb drop pre/post section (g/L)	9.18 (CI 8.2 -11.5)	10.41 (CI 8.83 - 12.0)

Table 1: Mean haemoglobin drop pre/post caesarean section

During the intervention year, 1 patient (0.27%) required a blood transfusion compared with 10 patients (2.8%) in 2016. A review of these patient notes showed significant blood loss (800-5300 mL), with 70% of them also receiving TXA, in addition to further uterotonics and blood products.

No adverse events related to TXA were logged in any of the patients reviewed.

Discussion

Although overall we have seen a significant reduction in blood transfusions between years, we could not wholly attribute this to the introduction of routine use of TXA.

Adoption of restrictive red blood cell transfusion thresholds and the use of intravenous iron to treat iron deficiency during this period, are likely to have played a role.

Whilst we have shown that routine use of TXA within our obstetric population has not raised any safety concerns, we look forward to further evidence of the benefits of prophylactic TXA in caesarean section.

References

1. NICE guideline Blood Transfusion 2015, https://www.nice.org.uk/guidance/ng24

2. Woman trial collaborators. Effect of early tranexamic acid administration on mortality, hysterectomy, and other morbidities in women with post-partum haemorrhage (WOMAN): an international randomised, double-blind, placebo-controlled trial. Lancet 2017; 389: 2105-16.