A COMPARISION BETWEEN VOLATILE AND TOTAL INTRAVENOUS ANAESTHETIC AND INTRAOPERATIVE BLEEDING IN SURGICAL TERMINATION OF PREGNANCIES

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Introduction

NICE guidelines for termination of pregnancy (TOP) [NG140] recommend 'If general anaesthesia is used, consider intravenous propofol and a short-acting opioid (such as fentanyl) rather than inhalational anaesthesia'. The rationale behind this guidance is that inhalational anaesthetics cause dose dependent uterine relaxation, which can lead to bleeding. There is, however, little published evidence in this area relating directly to TOP. The guidelines state the evidence used did not demonstrate one anaesthetic method was superior.

Abortion can be performed medically or surgically. Both are relatively safe procedures, in 2021, 3.8 per 1000 surgical abortions and 1 per 1000 medical abortions experienced complications. With surgical abortion common complications include haemorrhage and infection. Haemorrhage may lead to the need for blood transfusion and overnight stay in hospital.

Anecdotally, surgeons in our centre noticed volatile anaesthesia (VA) being associated with more bleeding than Total intravenous anaesthesia (TIVA) with propofol and opioids. This provoked an audit to compare TIVA and VA blood loss in STOP.

AIM: To evaluate our service and determine 1) the proportion of surgical TOP cases receiving TIVA vs VA 2) the surgical blood loss with each mode of anaesthesia

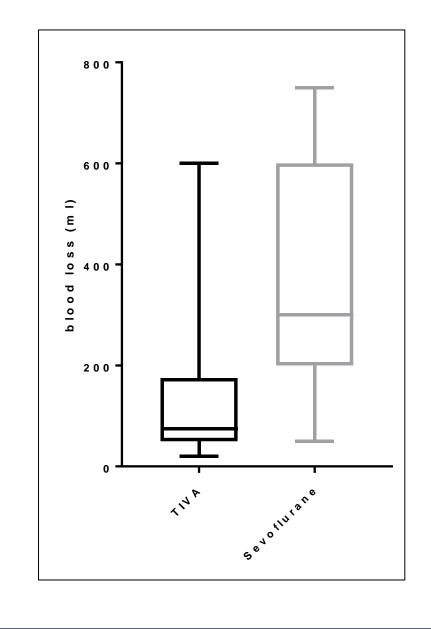
Methods

Case records were identified from the EPR system, anaesthetic notes and operative notes for information relating to anaesthetic type, uterotonics required, total blood loss, need for transfusion and overnight stay. All cases were within the first trimester. The final cohort contained a total 51 patients who had undergone surgical termination of pregnancy. 24 TIVA patients and 27 Volatile Anaesthetic patients.

Results

- 51 cases of surgical abortion under GA between 15th Sept 2022 and 28th Sept 2023 were included.
- TIVA n=24. Volatile n = 27
- Mean gestation in the TIVA group was 72 days and the volatile group was 69 days
- Data for blood loss was not normally distributed, therefore a Mann Whitney test was used for analysis
- The median blood loss for volatile anaesthesia was 300 ml, and with TIVA was 75 mls (p = 0.001)
- More patients in the volatile group had Estimated Blood Loss (EBL) >500ml, and more received uterotonics.
- More patients in the TIVA group received tranexamic acid (TXA)
- No patients received transfusion

	TIVA	Volatile
No of patients with EBL >500 ml	1 (4%)	10 (37%)
No Patients receiving uterotonics	1 (4%)	8 (30%)
No Patients receiving TXA	4 (17%)	2 (7%)



Discussion

This service evaluation demonstrated that TIVA was associated with less blood loss compared to volatile anaesthesia at our centre.

Recording intraoperative blood loss is intrinsically difficult to measure accurately and surgeon technique will influence blood loss recorded.

Other factors will be considered when choosing mode of anaesthesia. TIVA can have additional benefits such as a reduced risk of nausea and vomiting.

Further research is needed in this area, but our data support the guidance to consider TIVA over volatile anaesthesia