

# Return to theatre: A review of repeat surgery in the obstetric population

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## Introduction

Return to theatre following delivery is associated with an increase in patient morbidity on account of possible complications including infections, bleeding, pain, venous thromboembolism and psychological trauma.

In addition, longer patient-stay in hospital, use of antibiotics, and other medications, increased need for HDU care are factors for consideration in the care of these patients.

Identification of risk factors and preventable causes for return to theatre would be helpful in improving the quality of care given to obstetric patients.

## Aim

This review aimed to determine the prevalence of, risk factors and associated comorbidities with a relaparotomy or other surgical procedures post primary surgery / operative intervention in pregnant mothers and to identify preventable causes with the goal of improving the quality of care given to obstetric patients in the future.

## Methods

This was a retrospective review of obstetric surgical patients in the years 2018, 2019, and 2020 (3 YEARS). This study was conducted at the Barnsley Hospital NHS Foundation Trust.

The **Obstetric Surgical population** sampled in this study was defined as patients who had a caesarean delivery, trial of instrumental delivery, manual removal of the placenta, and surgical management of postpartum haemorrhage.

## Results

2784  
Obstetric  
Surgical  
Population

0.25%  
Prevalence of  
Return to  
Theatre

0.26%  
Prevalence of  
return to theatre  
in Caesarean  
Deliveries only

|                                  |              |
|----------------------------------|--------------|
| Lower Segment Caesarean Section  | 27.1% [2333] |
| Trial of Instrumental Delivery   | 30.9% [296]  |
| EUA / Surgical management of PPH | 0.08% [7]    |
| Manual Removal of the Placenta   | 1.7% [148]   |

**Prevalence of return to theatre was 0.25% [7patients]. (0.1% of trial of instrumental deliveries; 0.26% of Caesarean deliveries).**

**The primary procedure was performed by a Registrar in 6 out of 7 (85.7%) cases.**

85.7%  
[6 of the 7] women had an  
Emergency caesarean section as  
the Primary Surgery / Procedure

57.1%  
[4 of 7] women were  
transfused with blood / blood  
products

57.1%  
[4 of the 7]  
women had a  
BMI >30

14.3%  
[1 of the 7]  
women had a  
twin gestation

14.3%  
[1 of the 7] women  
had a preterm  
delivery

71.4%  
EBL >1000mls in 5 of the 7  
women at Repeat Surgery

28.6%  
EBL >1000mls in 2 of the 7  
women at Primary Surgery

## Results

Clinical features of patients who were returned to theatre include, temperature spikes / persistent pyrexia, persistent hypotension, tachycardia, soaked wound dressing, worsening abdominal pain and increased abdominal tenderness.

Other clinical features include active wound drain, indurated wound site-increasing, hypoactive/ absent bowel sounds, tense abdomen, increasing vulva pain / swelling, rising white cell count / CRP levels and dropping Hb.

Use of multiple antibiotics [cefuroxime, gentamicin, meropenem, metronidazole, linezolid, ciprofloxacin, teicoplanin, clindamycin, gentamycin, and metronidazole] with 5 different antibiotics notably used in one patient.

## Conclusions

Return to theatre in Barnsley Hospital has a low prevalence comparable to other reported data [ 0.2%<sup>a</sup> and 0.7%<sup>b</sup> documented in literature].

Most cases follow emergency caesarean section, are associated with PPH and blood transfusion. Additionally, extended antibiotic use is necessitated in cases complicated by infectious morbidity with significant impact on the patient.

## References

- Levin I, Rapaport et al. Risk factors for relaparotomy after caesarean delivery. *Int J Gynaecol Obstet.* 2012;119(2):163–5.
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