

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active. **Introduction:** The Scottish Public Services Ombudsman (SPSO) is the final stage for complaints about public services in Scotland. Complaints are considered only after they have been through the complaint procedure of the organisation concerned. The aim of the complaint review is not only to provide justice for the individual, but also to share the learning points in order to improve the delivery of public services in Scotland. Obstetric anaesthesia is generally perceived as a high-risk specialty for attracting complaints and litigation. We were interested to see how many complaints enquires relating to obstetric anaesthesia are processed by SPSO and what the common themes were. The secondary aim was to identify learning points to improve obstetric anaesthesia services.

Methods: We performed search in the Scottish Ombudsman NHS Decisions and Investigation Reports Database,¹ using key words "anaesthesia", "anaesthetist", "spinal", "epidural", "GA". All cases relating to obstetric anaesthesia were included over an 11-year period from 2008 to 2019.

Results: We identified 51 cases relating to anaesthesia and/or pain management out of 4700 NHS decisions and investigations reports, 13 of which were related to obstetric anaesthesia, constituting 25% of anaesthesia complaints and 0.27% of all NHS complaints. Complaints were related to regional anaesthesia techniques and pain relief (n = 8); medication errors and general anaesthesia (n = 2); communication issues (n = 2); and management of post-partum haemorrhage (n = 1). Ombudsman reports often noted poor documentation and unreasonable delays in providing pain relief, lack of follow up and debrief. Some reports analysed appropriateness of seniority of the clinicians involved and some suggested that communication with relatives can be improved.

Discussion: Reassuringly overall number of Ombudsman complaints related to obstetric anaesthesia is low, with common trends being labour analgesia provision, communication, avoidable drug errors. Although complaints analysis does not provide full picture of potential litigation points, it gives good guidance on how services can be improved. We suggest learning from complaints should be included in Clinical Governance process in all units to minimise future litigation risks.

References

 Scottish Public Services Ombudsman Findings https://www.spso.org.uk/ourfindings.

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P.3 D-dimers are elevated in pregnant women with and without COVID-19

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Introduction: COVID-19 can impact on the coagulation system and is associated with thrombosis. Data from non-pregnant adults admitted to hospital with COVID-19 show a high incidence of fibrin degradation products (D-dimers) above the normal range at hospital admission.¹ We evaluated D-dimers in women with COVID-19 admitted to our institution to assess whether COVID-19 resulted in elevated D-dimers or altered coagulation studies at presentation.

Methods: After ethical approval, anonymised observational data were collected on women admitted to our hospital with PCR swab positive COVID-19. These included demographics, symptoms, disease severity, pregnancy data, and blood results. Comparison was made with

consecutive women admitted for planned cesarean section with negative PCR COVID-19 screening.

Results: 34 women with PCR swab positive tests were recruited between 10 June and 31 December 2020. Median [IQR, range] gestation was 37 + 6 [7 + 0, 16 + 4 - 41 + 5]. 19 were symptomatic, 15 were asymptomatic and detected on pre - admission screening. 6 women (17.6%) required oxygen therapy of which one progressed to invasive ventilation for respiratory failure. 19 women were white British and 15 (44%) from BAME groups. In the PCR negative group, median gestation was 39 + 0 [0 + 3, 33 + 5 - 40 + 6]. 60 were white British and 18 (23%) from BAME groups. The proportion of BAME women in PCR pos and neg groups differed, *P* <0.0015. D-dimer and fibrinogen were increased above the normal range in all women and were indistinguishable between COVID positive and negative women. APTT and PT were longer in women with COVID-19 but remained within the normal range.

Table: Admission blood results

	COVID-19 Neg	COVID-19 Pos	P value
	n=78	n= 34	<i>F</i> value
Hb (g/L)	124. 5 [115.3-130]	114 [109.3-125]	< 0.01
Plt (x109/L)	220.5 [188.5-257]	181.5 [159.8-266]	0.21
WCC (x109/L)	9.4 [7.8-11.1]	8 [6.8-12.1]	0.26
Fibrinogen (g/L)	4.4 [4-4.9]	4.2 [4.7-9.0]	0.52
D-Dimer (µg/L)	1610 [1268-2305]	1654 [1159-1744]	0.36
PT (s)	10.6 [10.3-11]	11.1 [10.8-11.3]	0.01
APTT (s)	26.8 [25.3-28.3]	31.4 [26.6-31.9]	< 0.001

Median [IQR], P value from two tailed Mann-Whitney U tests.

Discussion: BAME women were over represented in women admitted with PCR positive COVID-19, and COVID-19 positive women had a lower Hb than controls. There was no evidence of increased fibrin clot formation or breakdown between COVID positive and negative women, however there was evidence of minor depletion or inhibition of other coagulation factors. These results differ from non-pregnant adults. The cause of this discrepancy and whether it has any clinical significance needs further investigation.

References

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P.4 ROTEM parameters during pregnancy: A meta-analysis A.M. Ronenson^a, E.M. Shifman^{b,*}, A.V. Kulikov^c, Y.S. Raspopin^d

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Introduction: Integral tests such as TEG and ROTEM have become increasingly popular for urgent assessment of haemostasis during postpartum haemorrhage (PPH).¹ The manufacturer of ROTEM (TEM