

Retrospective review of women who received fibrinogen concentrate during treatment of PPH in the Rotunda Hospital
from 2019-2021

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Introduction

- Hypofibrinogenaemia is associated with progression to severe postpartum haemorrhage (PPH). However, the OBS2 study suggests no benefit to fibrinogen replacement above 2 g.L-1.1

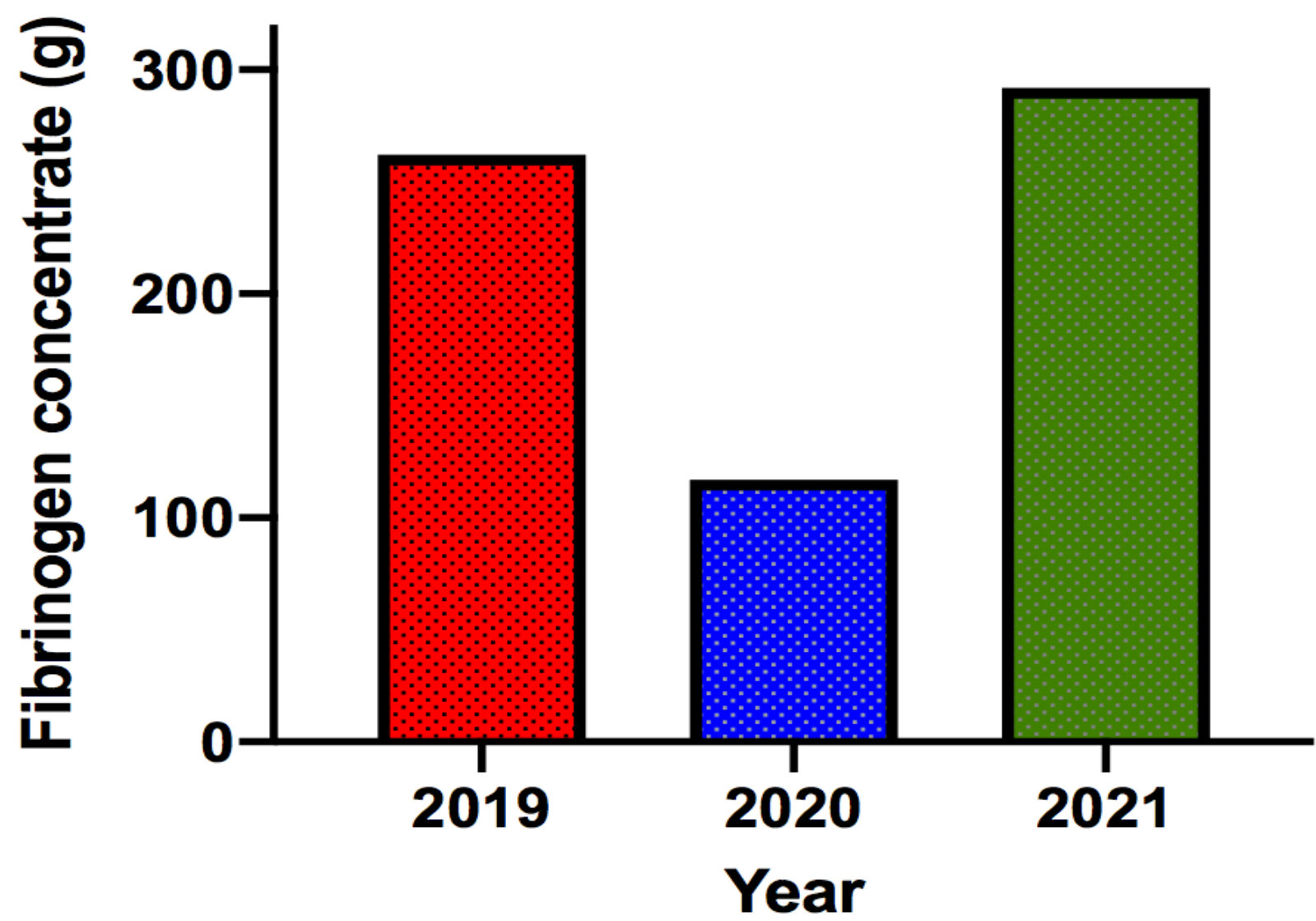
Methods

- Data on blood loss, aetiology of haemorrhage, quantity of fibrinogen concentrate administered, as well as Clauss fibrinogen levels before and after fibrinogen concentrate administration were collected and analysed for all women who received fibrinogen concentrate at the Rotunda Hospital during the three-year study period.

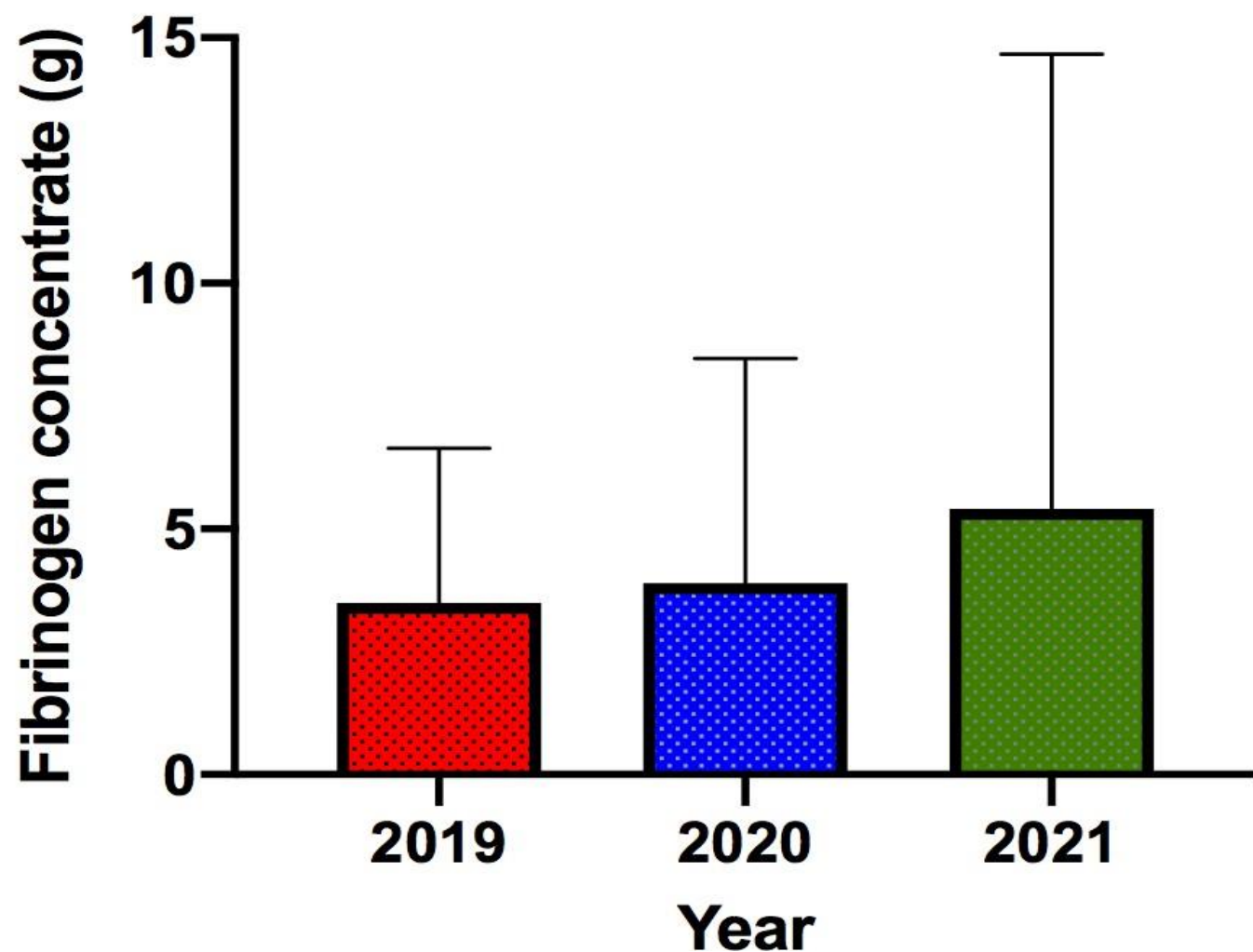
Results

- 159 women** with postpartum haemorrhage received fibrinogen concentrate during the study period.
- Mean (SD) estimated blood loss in this cohort was **2383 (1445) mL**.
- A mean (SD) of **4.2 (6.2) grams** of fibrinogen concentrate were administered to each patient.
- The mean (SD) laboratory Clauss fibrinogen level prior to transfusion was **2.8 (5.6) g/L**.
- Only **25%** of women who received fibrinogen concentrate had a Clauss fibrinogen level of < 2 g/L prior to transfusion (the recommended transfusion threshold).
- 362g** of Fibrinogen (**€192,730**) was administered to women with no laboratory indication for fibrinogen concentrate.
- PPH due to **coagulopathy or retained tissue** were more likely to have a lower initial pre-transfusion fibrinogen level than PPH due to **trauma or atony** (**p<0.01**).

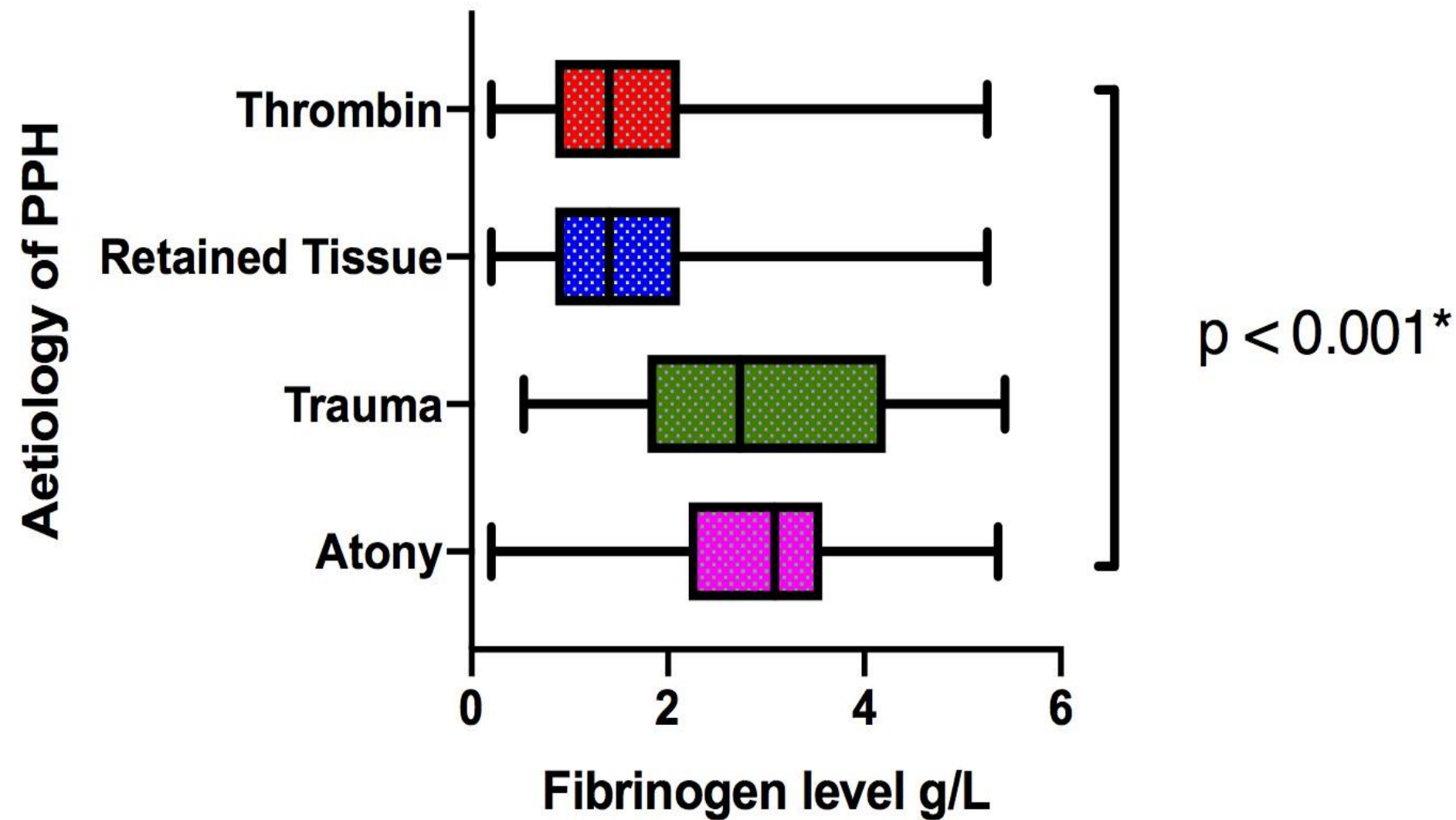
Rotunda total PPH fibrinogen consumption



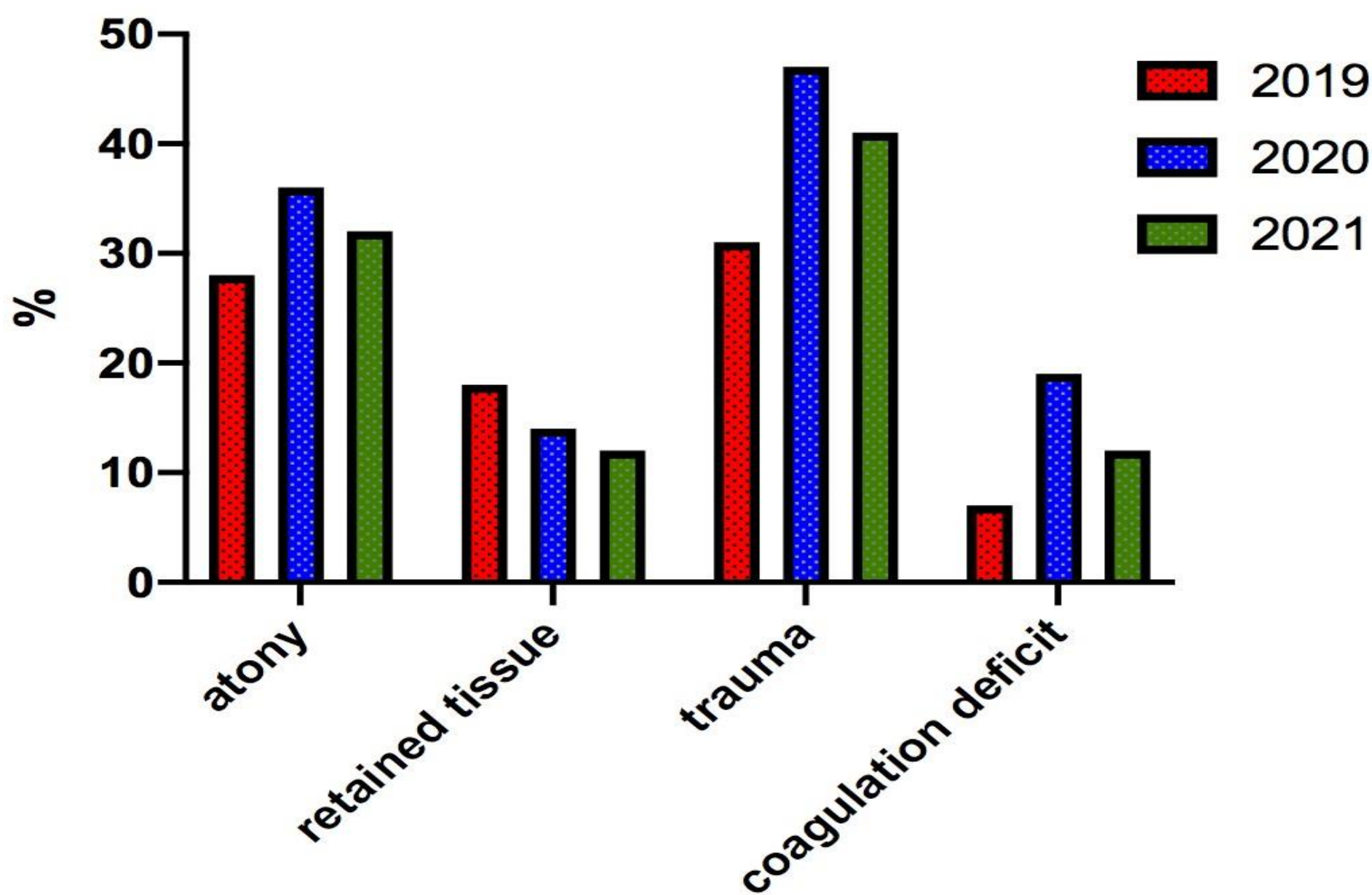
Mean quantity of fibrinogen administered per patient



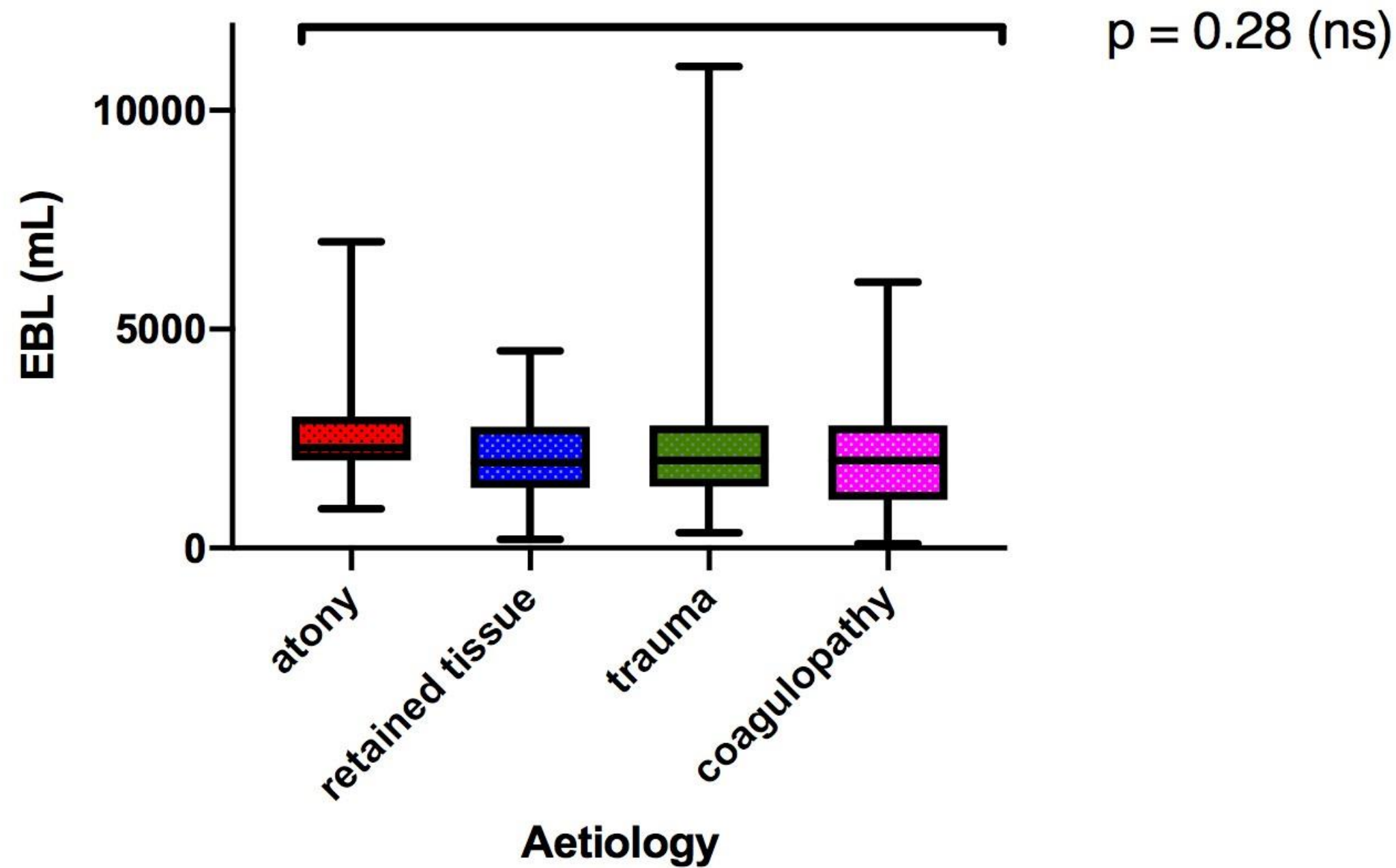
Initial Clauss fibrinogen level by aetiology (2019-2021)



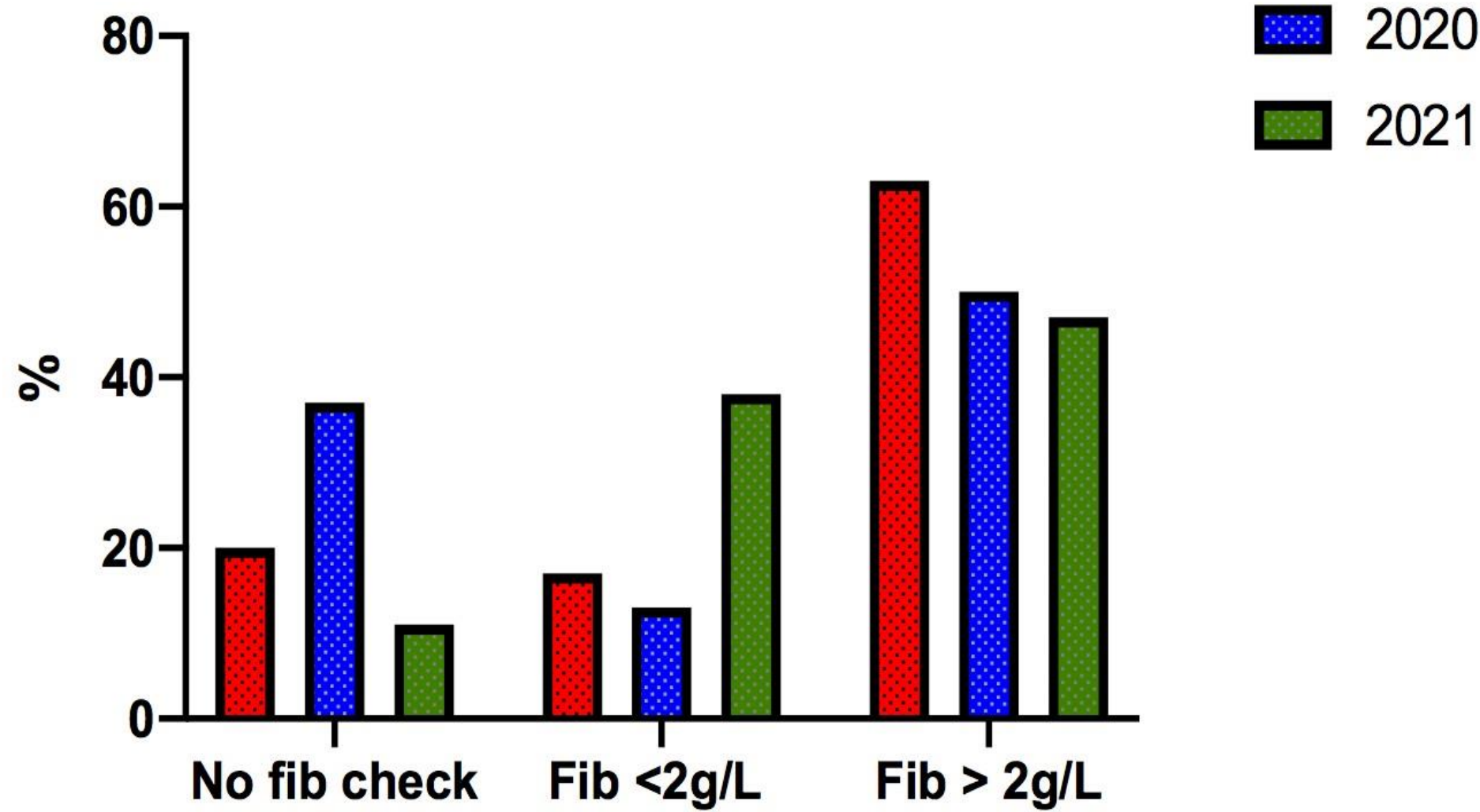
% Women Receiving Fibrinogen by Aetiology of PPH



Estimated blood loss by cause of PPH (2019-2021)



Pre-transfusion Clauss fibrinogen level



Conclusion

- The management of PPH requires rapid clinical decision making and blood products are often administered empirically, prior to waiting for laboratory results. Viscoelastic testing may improve transfusion management, rapidly detecting hypofibrinogenaemia and reducing total consumption of coagulation products.

Reference: 1. Collins PW, Cannings-John R, Bruynseels D, Mallaiah S, Dick J, Elton C et al. Viscoelastometric-guided early fibrinogen concentrate replacement during postpartum haemorrhage: OBS2, a double-blind randomized controlled trial. Br J Anaesth. 2017 Sep 1;119(3):411-421.