

INTRODUCTION

- Postpartum hemorrhage is a major cause of maternal mortality
- Besides causative treatment and volume replacement, temporizing measures like external aortic compression may be used to reduce blood loss (1,2)
- **Aim of the study:** to assess the use and experienced effect of external aortic compression

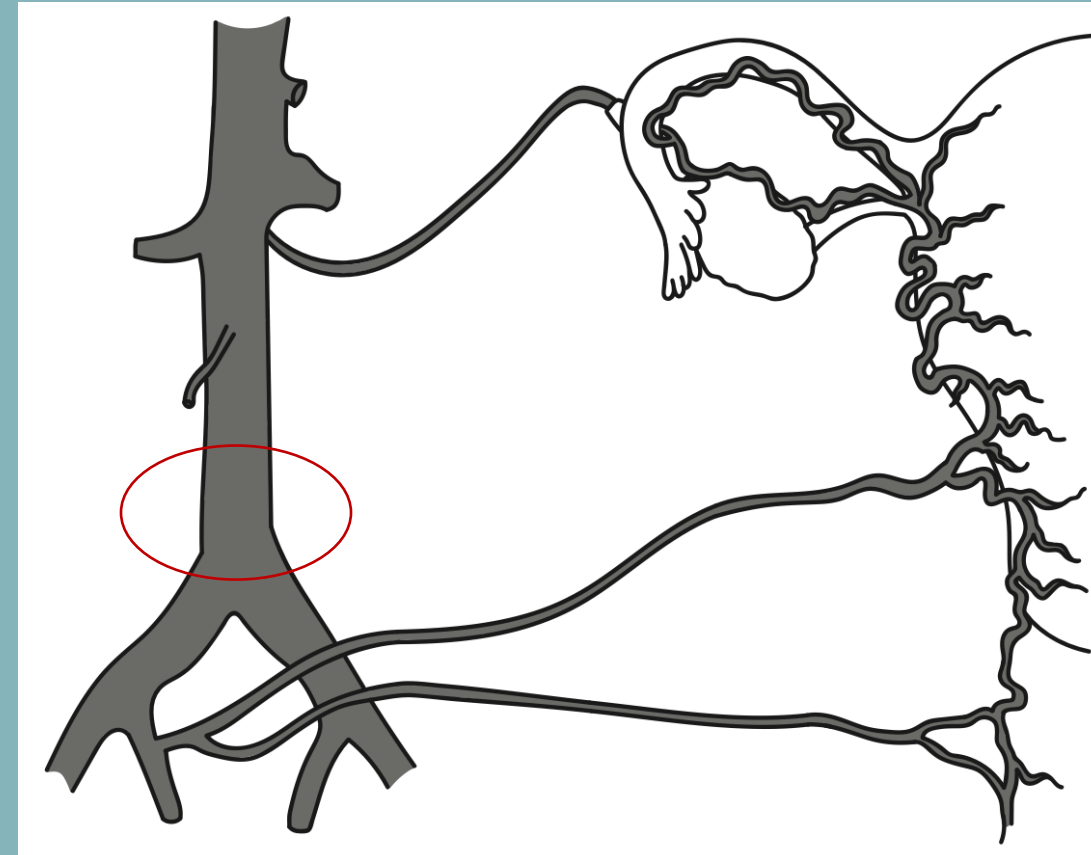


Figure 1 The vascularization of uterus and vaginal tract. Red oval = location for compression

(Illustration by S. Heitmann)

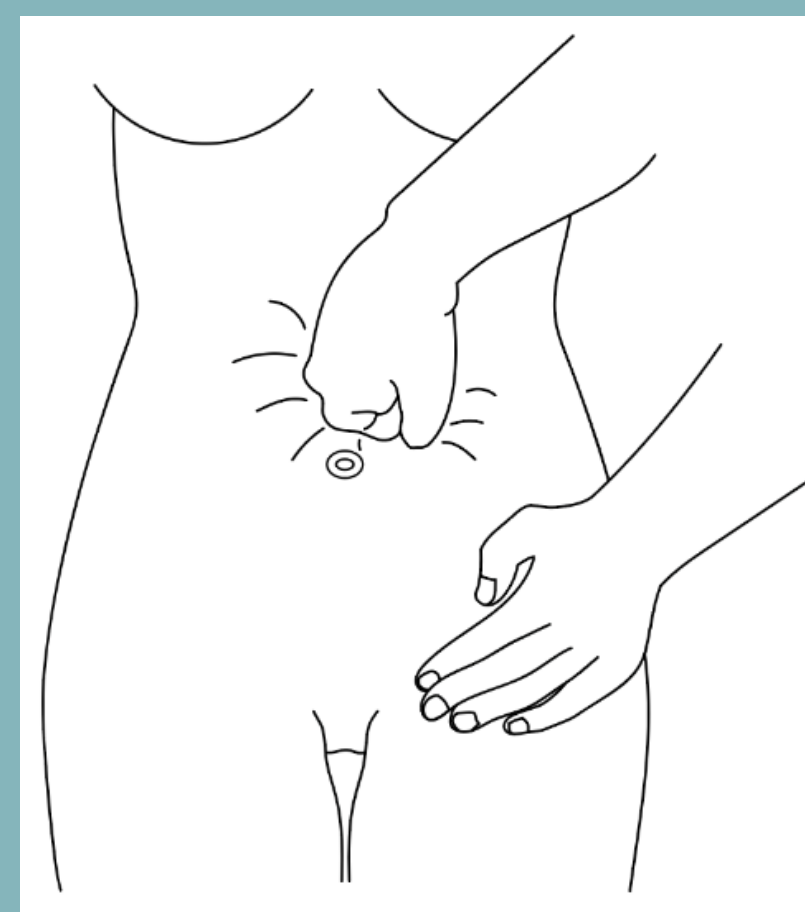


Figure 2 Compression is performed at the level of the umbilicus, above the bifurcation of the aorta. The efficacy is evaluated by cessation of the pulsation in one of the the femoral arteries.

(Illustration by S. Heitmann)

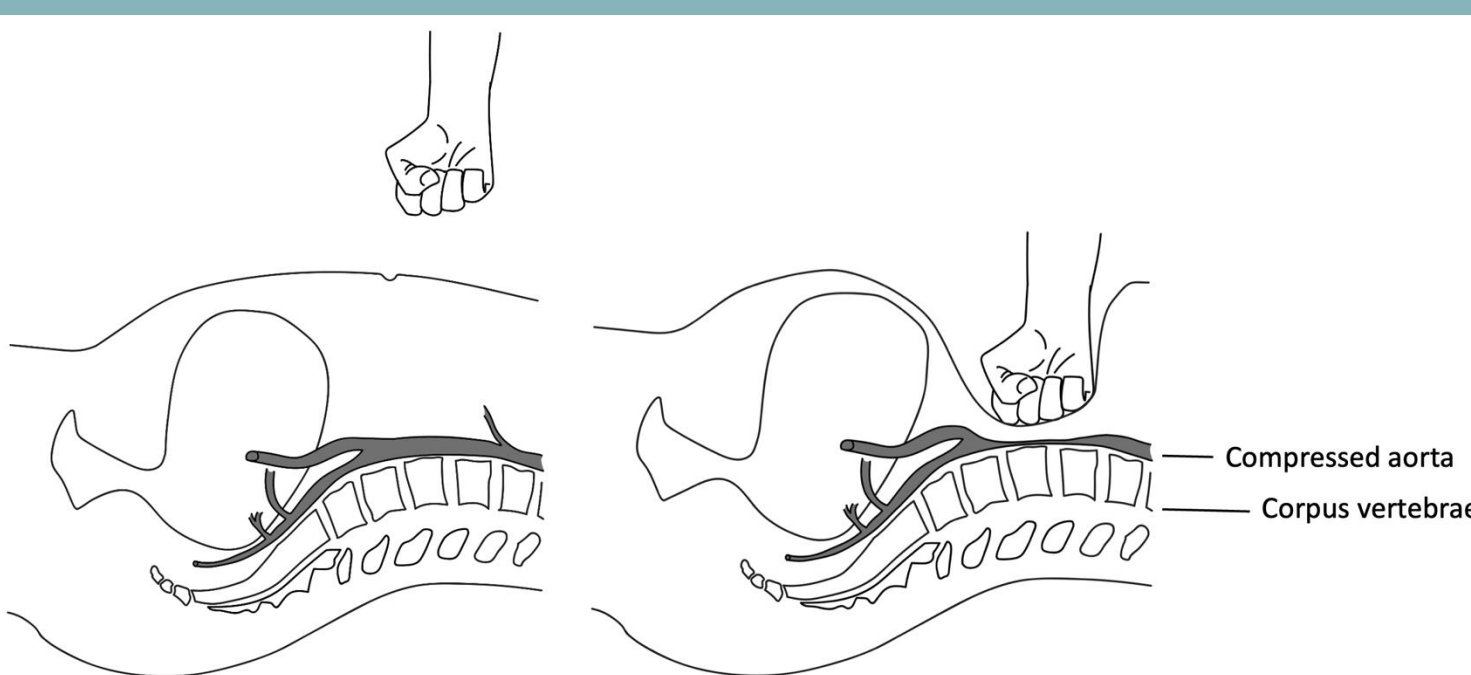


Figure 3 Aorta is compressed against the spinal column when EAC is applied.

(Illustration by S. Heitmann)

RESULTS

- 73 women invited to participate, 67 were included
- 36 vaginal births and 31 cesarean sections
- External aortic compression applied:
 - 18 of the 36 women after vaginal birth
 - 4 of the 31 women after cesarean section
- Median bleeding volume: 1300 ml (900-4000)
- Application time varied from <5 minutes to 45 minutes
- 86 % had a compression time of <15 minutes
- Primary indication: heavy bleeding, independent of total bleeding volume
- The main reason for not applying external aortic compression: evaluated not to be indicated (58%)
- 31% stated that they had not considered it in the situation
- **19 of the 22 healthcare workers reported that external aortic compression provided temporary bleeding control**
- **In 2 cases aortic compression had no effect on the bleeding**

METHOD

- Observational study conducted at a hospital with 3000 annual births
- Data collection: October 1st to December 31st, 2024
- Inclusion criteria:
 - estimated blood loss >1000 ml
 - and/or where external aortic compression was applied
- The use and experienced effect of external aortic compression were reported by the healthcare workers using a registration form.

DISCUSSION

- The results indicate that external aortic compression is more frequently used after vaginal birth than in cesarean section.
- According to healthcare workers the intervention provides temporary bleeding control.

References

1. Soeyland T, Hollott JD, Garner A. External Aortic Compression in Noncompressible Truncal Hemorrhage and Traumatic Cardiac Arrest: A Scoping Review. *Ann Emerg Med.* 2022;79(3):297-310.
2. Nieto-Calvache AJ, Palacios Jaraquemada JM, Basanta N, Aryananda RA, Sinisterra-Díaz SE, Rodriguez F, et al. Internal manual compression of the aorta-an effective way to temporarily control pelvic bleeding in obstetrical hemorrhage. *Am J Obstet Gynecol.* 2022;227(1):96-7.