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# EFFECTIVENESS OF TOURNIQUET WITH AND WITHOUT ADJUNCTIVE MISOPROSTOL ON HAEMORRHAGE DURING MYOMECTOMY

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**Background**

- Excessive intraoperative bleeding is the most feared complication of open abdominal myomectomy.
- Minimising blood loss is critical to improving patient outcomes and reducing transfusion needs.
- Tourniquets are commonly used to control bleeding during surgical procedures.
- However, there is limited evidence on the effectiveness of combining tourniquet use with misoprostol as a haemostatic strategy.

**Objective**

To compare intraoperative blood loss in women undergoing open myomectomy using:  
Tourniquet + Misoprostol (*intervention group*)  
vs  
Tourniquet alone (*control group*)

**Discussion & Conclusion**

This study showed a significant reduction in intraoperative blood loss with:  
Tourniquet + vaginal misoprostol compared to  
Tourniquet alone  
(678.17 ± 42.38 mL vs 837.03 ± 39.17 mL; p = 0.042)

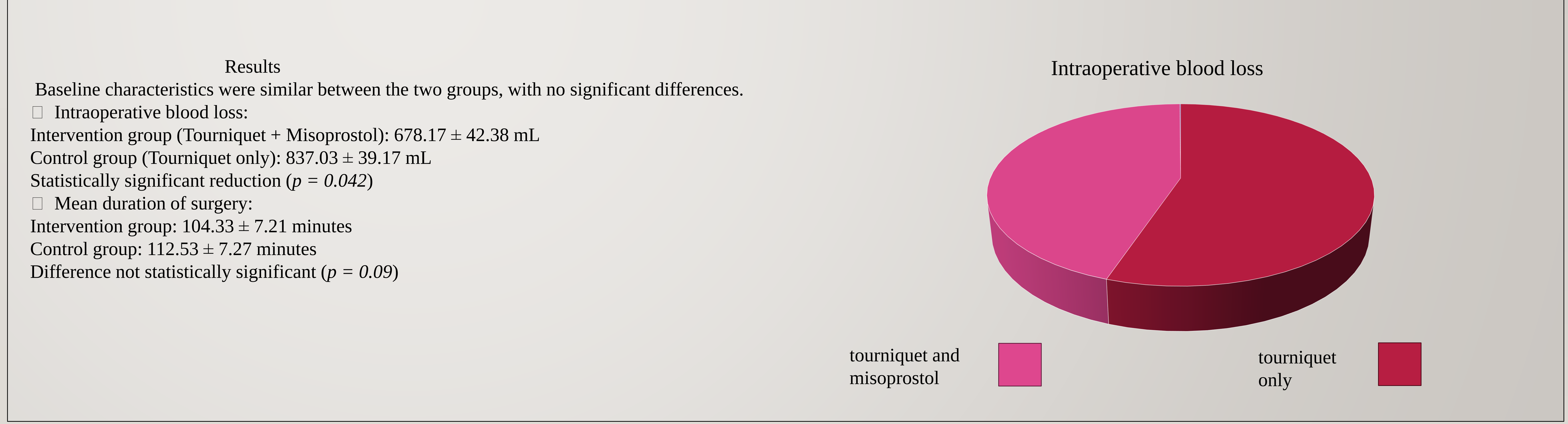
The null hypothesis was rejected based on this finding. Results are consistent with previous studies:  
Nnagbo et al.<sup>1</sup>  
Agyabeng et al.<sup>2</sup>  
There was no significant difference in operative time between the two groups.  
Conclusion: Adding misoprostol to tourniquet use is effective in reducing blood loss, without prolonging surgery.

**Methodology**

- Design: Triple-blind, two-centre randomised controlled trial
- Setting: Two tertiary hospitals in Delta State, Nigeria
- Study period: July 1, 2020 – January 31, 2021
- Participants:
  - 140 women undergoing open myomectomy
  - Randomly assigned to:
    - Intervention group: Tourniquet + Misoprostol
    - Control group: Tourniquet only

- Primary outcome: Intraoperative blood loss
- Secondary outcome: Duration of surgery
- Data analysis:
  - Conducted using SPSS v21
  - Chi-square tests for categorical variables
  - Student’s t-tests for continuous variables

P < 0.05 is considered statistically significant



1. Nnagbo JE, Dim CC, Eze MI, Mba SG. Effects of misoprostol in reducing blood loss during abdominal myomectomy in Nigeria. *Niger J Clin Pract.* 2023;26(4):454–462.

2. Alhalaby AEF, Shehl HA, Abo Shady HM, El Khoully NI. Effect of use of single dose of misoprostol on blood loss during myomectomy. *Egypt J Hosp Med.* 2021;82(2):296–301.

3. Nwobodo EI, Okafor II, Ezechi OC, et al. Effects of misoprostol in reducing blood loss during abdominal myomectomy in Nigeria. *Niger J Clin Pract.* 2023;26(4):592–598.

4. Adesina KT, Owolabi BO, Raji HO, Olarinoye AO. Abdominal myomectomy: A retrospective review of determinants and outcomes of complications at the University of Ilorin Teaching Hospital, Ilorin, Nigeria. *Malawi Med J.* 2017;29(1):37–42.

5. Ezechi OC, Nwobodo EI, Okafor II, et al. Comparing perioperative vaginal misoprostol with intraoperative pericervical hemostatic tourniquet in reducing blood loss during abdominal myomectomy: A randomized controlled trial. *J Obstet Gynaecol Res.* 2019;45(3):640–646.