



Introduction and Background

- Pharmacological thromboprophylaxis involves balancing a lower risk of venous thromboembolism (VTE) against a higher risk of bleeding, a trade-off that critically depends on VTE and bleeding risks in the absence of prophylaxis (baseline risk)
- Baseline risks likely vary widely between procedures, but their magnitude remains uncertain
- At least in part due to this remaining uncertainty regarding baseline risk, thromboprophylaxis practices vary substantially within and between countries in benign gynecologic surgery

Methods

- We conducted comprehensive searches on Embase, MEDLINE, Web of Science, and Google Scholar
- We identified observational studies reporting symptomatic VTE or major bleeding (bleeding requiring reoperation, bleeding leading to transfusion or Hb <70g/L) after gynecologic non-cancer surgery procedures
 - In addition, we performed separate searches for randomized trials addressing effects of thromboprophylaxis and conducted a web-based survey on thromboprophylaxis practice
- We adjusted the reported risk estimates for thromboprophylaxis and length of follow-up to determine baseline cumulative incidence at 4 weeks post-surgery for each procedure
- We stratified VTE risk by patient risk factors as low (no patient risk factors), medium (age > 75 years, or BMI > 35, or VTE in a 1st degree relative), or high (any combination or personal VTE history)
- We excluded high risk of bias articles, when possible, and used the GRADE approach to rate evidence certainty

Results

- We identified 7 556 titles and abstracts, of which 131 studies proved eligible, reporting on 50 gynecologic non-cancer surgery procedures
- Evidence certainty was generally moderate or low for VTE and low or very low for bleeding
- 4-week risk of VTE varied widely between procedures, and between approaches within the same procedure (Table)

Conclusions

- VTE reduction with pharmacological thromboprophylaxis outweighs increase in bleeding in some patients and in some procedures (e.g. high risk patients undergoing minimally-invasive sacrocolpopexy), whereas the opposite is true in others.
- In many procedures, thromboprophylaxis reduces VTE risk trivially.

Table. 4-week postoperative risk of symptomatic venous thromboembolism and bleeding requiring reoperation after certain gynecologic non-cancer procedures

Procedure	Outcome	Patients (studies)	Estimate (%) Median (Low – Medium – High)	Evidence certainty
Deep endometriosis surgery, minimally-invasive	Venous thromboembolism	745 (6)	0.5 (0.4 - 0.8 - 1.7)	Very low
	Bleeding requiring reoperation	3 081 (8)	0.6	Low
Myomectomy, minimally-invasive	Venous thromboembolism	4 488 (5)	<0.1 (<0.1 - 0.1 - 0.1)	High
	Bleeding requiring reoperation	2 550 (4)	0.3	Low
Oophorectomy, minimally-invasive	Venous thromboembolism	52 599 (1)	0.3 (0.1 - 0.3 - 0.6)	Moderate
Sacrocolpopexy, minimally-invasive	Venous thromboembolism	21 465 (9)	0.6 (0.5 – 1.0 - 1.9)	Moderate
	Bleeding requiring reoperation	1 017 (4)	0.2	Moderate
Vaginal pelvic organ prolapse surgery, without mesh	Venous thromboembolism	73 626 (13)	0.2 (0.1 - 0.2 - 0.4)	Low
	Bleeding requiring reoperation	1 050 (4)	0.9	Low
Vaginal sling surgery for urinary incontinence	Venous thromboembolism	55 472 (7)	<0.1 (<0.1 - 0.1 - 0.1)	Moderate
	Bleeding requiring reoperation	7 117 (1)	0.1	Moderate
Supracervical hysterectomy, laparoscopic	Venous thromboembolism	7 450 (3)	0.1 (0.1 - 0.2 - 0.4)	Moderate
	Bleeding requiring reoperation	4 042 (3)	0.5	Very low
Supracervical hysterectomy, open	Venous thromboembolism	2 332 (1)	0.7 (0.6 - 1.2 - 2.5)	Moderate
	Bleeding requiring reoperation	2 248 (2)	2.1	Very low
Total hysterectomy, minimally-invasive	Venous thromboembolism	71 404 (11)	0.2 (0.1 - 0.3 - 0.6)	Moderate
	Bleeding requiring reoperation	4 042 (3)	0.5	Moderate
Total hysterectomy, open	Venous thromboembolism	6 967 (3)	0.8 (0.6 - 1.2 - 2.4)	Moderate
	Bleeding requiring reoperation	2 248 (2)	2.1	Moderate
Total hysterectomy, vaginal	Venous thromboembolism	16 519 (8)	0.2 (0.1 - 0.3 - 0.6)	Moderate
	Bleeding requiring reoperation	2 252 (5)	0.4	Low

We were able to create 50 evidence profiles in total. However, we were not able to include all of them on this poster due to space constraints.

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