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SMFM Statement

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Society for Maternal-Fetal Medicine Special Statement: Checklist for thromboembolism prophylaxis after cesarean delivery

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Venous thromboembolism (VTE) is a leading cause of potentially preventable maternal death.[1] Cesarean delivery is associated with a 3- to 4-fold increased risk of developing VTE compared with vaginal delivery.[2] Routine postcesarean thromboprophylaxis can reduce the risk of maternal death from VTE.[3] The Society for Maternal-Fetal Medicine (SMFM) recently published guidelines for postcesarean thromboprophylaxis.[4] Here we summarize the SMFM guidelines in a convenient 1-page checklist (Box) to help providers select the appropriate method for postcesarean thromboprophylaxis.

Facilities may choose to implement this checklist by referencing it in the "sign out" portion of the cesarean delivery checklist, which typically includes a review of key concerns for recovery.[5] Alternative methods of implementation can be considered, such as incorporating the checklist into the routine postcesarean order set or including it in a VTE prevention bundle.[4] Reliance on memory alone to guide prophylaxis is likely to result in errors because the guidelines are somewhat complex.

REFERENCES

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SMFM has adopted the use of the word "woman" (and the pronouns "she" and "her") to apply to individuals who are assigned female sex at birth, including individuals who identify as men as well as nonbinary individuals who identify as both genders or neither gender. As gender-neutral language continues to evolve in the scientific and medical communities, SMFM will reassess this usage and make appropriate adjustments as necessary.

All questions or comments regarding the document should be referred to the SMFM Patient Safety and Quality Committee at smfm@smfm.org.

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BOX

Thromboembolism prophylaxis after cesarean delivery checklist

Thromboembolism Prophylaxis After Cesarean Delivery
Checklist following the Guidelines of SMFM Consult Series #51
This checklist is a SAMPLE only and does not dictate an exclusive course of action for individual patients.

For all cesarean deliveries:
- ☐ Pneumatic sequential compression devices (SCDs) placed prior to surgery start
- ☐ SCDs continued until patient is fully ambulatory

For women with personal history of deep venous thrombosis or pulmonary embolism:
- ☐ SCDs as above
- ☐ Prophylactic low-molecular-weight heparin (eg, enoxaparin 40 mg SC daily); see section below for starting time; continue for 6 weeks postoperatively

For women with inherited or acquired thrombophilia[a] and no previous thrombosis:
- ☐ SCDs as above
- ☐ Prophylactic low-molecular-weight heparin (eg, enoxaparin 40 mg SC daily); see section below for starting time; continue for 6 weeks postoperatively

For women with body mass index (BMI) 40 kg/m^2 or greater (class 3 obesity) who have thrombophilia[a] or history of deep venous thrombosis or pulmonary embolism:
- ☐ SCDs as above
- ☐ Intermediate-dose low-molecular-weight heparin (eg, enoxaparin 40 mg SC every 12 hours); see section below for starting time; continue for 6 weeks postoperatively

For women with combinations of the above risk factors:
- ☐ SCDs as above
- ☐ Individualized management, such as intermediate-dose low-molecular-weight heparin (eg, enoxaparin 40 mg SC every 12 hours) or adjusted-dose (therapeutic) low-molecular-weight heparin (eg, enoxaparin 1 mg/kg SC every 12 hours); see section below for starting time; continue for 6 weeks post-operatively

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Timing of initial dose of postoperative low-molecular-weight heparin:
- ☐ General anesthesia: at least 1 hour postoperatively.
- ☐ Neuraxial anesthesia (spinal or epidural):
  - ○ Prophylactic low-molecular-weight heparin dose: at least 12 hours after placement of spinal needle or epidural catheter and at least 4 hours after removal of epidural catheter.
  - ○ Intermediate or therapeutic low-molecular-weight heparin dose: at least 24 hours after placement of spinal needle or epidural catheter and at least 4 hours after removal of epidural catheter.
- ☐ In patients at very high risk for thromboembolism (eg, mechanical heart valve or recent extensive thrombosis), IV heparin starting 1 hour after removal of spinal needle or epidural catheter to avoid long periods without anticoagulation. Alternatively, consider general anesthesia.
- ☐ Significant intraoperative bleeding: Individualize, balancing increased risk of thromboembolism after hemorrhage or transfusion versus risk of further bleeding. Consider unfractionated heparin.

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FVL, Factor V Leiden; *IV*, intravenous; *MTHFR*, methylenetetrahydrofolate reductase; *PGM*, prothrombin gene G20210A mutation; *SC*, subcutaneous, *SMFM*, Society for Maternal-Fetal Medicine.

[a]Thrombophilias include acquired (antiphospholipid syndrome), high-risk inherited (antithrombin deficiency, FVL homozygosity, PGM homozygosity, or heterozygosity for both FVL and PGM), and low-risk inherited (protein C deficiency, protein S deficiency, FVL heterozygosity, or PGM) disorders. MTHFR mutations are *not* considered thrombophilias.

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