Menopausal hormone therapy and venous thromboembolism

Venous thromboembolism (VTE), including deep-vein thrombosis (DVT) and pulmonary embolism (PE), is a serious cardiovascular event whose incidence rises with age.

Medical history

The following points should be covered for a woman with VTE:

- Personal and family history
- Was the episode provoked or unprovoked?
- Was the episode confirmed objectively?
- Was a thrombophilia screen undertaken?
- Are there risk factors, such as malignancy or connective-tissue disease?
- Was the woman or family member anticoagulated at the time?

Menopausal hormone therapy (MHT) for women with VTE

- **Oral estrogen alone** and **oral combined preparations** are associated with increased VTE risk.
- **Estrogen-alone preparations containing estradiol** have a lower VTE risk than those containing **conjugated equine estrogens**.
- For combined oral preparations, the risks are significantly greater for conjugated equine estrogen than for estradiol.
- **Transdermal preparations** (estrogen alone or combined) are not associated with increased VTE risk.
- Micronized progesterone and dydrogesterone might have a better risk profile than other progestogens with regard to VTE risk.
- Topical estrogens are not associated with increased VTE risk.
- Raloxifene, but not tibolone, is associated with increased VTE risk.
- Ospemifene is contraindicated in women with active VTE or a history of it.
- Transdermal estrogen should also be the first choice in **overweight/obese women** wishing to take MHT.
- Systemic MHT, preferably with transdermal estrogen, as well as topical estrogens, can be prescribed for **women taking long-term anticoagulation**.
- Major surgery under general anesthesia, including orthopedic and vascular leg surgery, is a predisposing factor for VTE and it may be prudent to stop MHT 4–6 weeks before surgery and restart it only after full mobilization. If MHT is continued or if discontinuation is not possible, VTE prophylaxis is advised.

A personal or family history of VTE is not absolute contraindication to MHT but the benefit–risk profile needs careful assessment.

Further information

EMAS CareOnline 2020 https://emas-online.org/emas-careonline

Vinogradova et al. (2019) Use of hormone replacement therapy and risk of venous thromboembolism https://doi.org/10.1136/bmj.k4810