

CEU Statement: Management of women taking anticoagulants or antiplatelet medications who request intrauterine contraception or subdermal implants

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This guidance aims to encourage the consistent and safe management of women requesting intrauterine contraception (IUC) and subdermal implants (SDI) who are taking anticoagulants or antiplatelet medications. It is primarily aimed at clinicians working in primary care and community sexual and reproductive health clinics.

1. Commonly used medications

Apixaban, rivaroxaban, edoxaban and dabigatran are direct oral anticoagulants (DOACs). Dabigatran is a direct thrombin inhibitor while the others act by inhibiting factor Xa. These medications may be used first line for the treatment of acute deep vein thrombosis (DVT) or acute pulmonary embolism (PE), prevention of stroke in atrial fibrillation and prophylaxis of DVT and PE in adults undergoing major orthopaedic surgery.¹ They are not used in individuals who require a greater intensity of anticoagulation, e.g. those with artificial heart valves, recurrent thrombosis in association with antiphospholipid syndrome or recurrent thromboembolism while on therapeutic anticoagulation. For the treatment of DVT/PE, the dose of apixaban is 10mg b.d. for 7 days followed by 5mg b.d. No initial overlap with low molecular weight heparin (LMWH) is required as it only takes 2-4 hours for DOACs to exert their maximum effect. Their short half life (8-15 hours) means that patients are at risk of further clot formation if just one dose is missed. DOACs do not require routine monitoring as they produce a predictable level of anticoagulation. There are currently no reversal agents for factor Xa antagonists. Idaracizumab is a reversal agent for dabigatran.

Warfarin inhibits the synthesis of the vitamin K-dependent clotting factors: factors II, VII, IX and X. The dose is adjusted according to the international normalised ratio (INR). The half life of warfarin is 35 hours and it takes around 1 week for a steady anticoagulant effect to be achieved. Vitamin K is used to reverse the effects of warfarin but takes 6-24 hours to become effective, depending on mode of administration. Prothrombin complex concentrate achieves immediate reversal.

Dalteparin, enoxaparin and tinzaparin are LMWHs used for the prevention and treatment of VTE and for the treatment of myocardial infarction and unstable coronary artery disease. These medications are also used to prevent clotting of extracorporeal circuits. Routine monitoring is usually not required with LMWH but can be useful in patients who are at increased risk of bleeding, are over- or underweight or have renal impairment. The half life of LMWHs is 4-6 hours.

The most commonly used antiplatelet medications are **aspirin** and **clopidogrel**.

2. Assessing bleeding risk

Insertion of SDIs and IUC in women using warfarin is unlikely to be associated with a risk of significant bleeding.²⁻⁵ There are no studies specifically assessing bleeding risk in women using DOACs undergoing SDI or IUC insertion. From clinical experience, DOAC use with these procedures carries a low bleeding risk.

Clinicians may be concerned about the risk of bleeding if uterine perforation occurs. A large prospective study of IUC insertions (n=61,448 women) which included uterine perforations found no serious sequelae such as bowel/bladder injury or peritonitis.⁶ The study did not comment on whether any of these women were using anticoagulants. It is unknown to what extent intra-abdominal bleeding increases in women using anticoagulants following uterine perforation with IUC. Clinicians should be aware of factors that may increase the risk of further bleeding or increase the risk of perforation, e.g. postnatal, breastfeeding.

Some women with complex VTE history may be receiving relatively high doses of anticoagulants (target INR may be higher or higher doses of LMWH for weight may be used). Clinicians may wish to liaise with local gynaecology and haematology for these women and arrange for IUC to be fitted in a hospital setting.

Assessment of the woman should include the following considerations:

- ▶ What anticoagulant is she is taking and why?
- ▶ Is she highly anticoagulated? E.g. women are sometimes on higher doses of anticoagulants if they have had breakthrough clots.
- ▶ Expected duration of therapy
- ▶ Previous bleeding problems with procedures (e.g. dental work)
- ▶ Other medical conditions or medications that may increase the risk of bleeding further (e.g. dual antiplatelet therapy, liver disease, chronic renal failure)
- ▶ Result and date of most recent INR if on warfarin
- ▶ Is she postnatal or breastfeeding? There is an increased risk of perforation in the first 36 weeks postnatal and if breastfeeding⁶
- ▶ Previous difficult/failed IUD insertions

3. Management

3.1 General considerations

- ▶ IUC and SDI insertions in women taking anticoagulants should be performed by clinicians who hold the relevant FSRH letters of competence and ideally are specialist contraceptive providers.
- ▶ Women who are anticoagulated can, in general, have their SDI or IUC fitted within the general practice or community sexual and reproductive health clinic setting.
- ▶ Consideration should be given to the timing of SDI and IUC insertions in anticoagulated women. Ideally, they should be done within normal office hours in case of bleeding problems.
- ▶ Patients who are using LMWHs should ideally have their SDI or IUC fitted to coincide with the lowest anticoagulant effect, e.g. if the dose is taken daily in the evening then insertion in the afternoon would carry a lower bleeding risk than insertion in the morning.
- ▶ It may be appropriate to counsel women and bring them back to have their IUC or SDI fitted at a separate appointment. Consider giving the POP as a bridging method.
- ▶ Avoid fitting IUC or SDI in the community in the first 2 weeks of apixaban use when the dose is higher.
- ▶ Women who have a target INR >3.5 or who are on higher than standard doses of LMWH should have their IUC fitted in a hospital setting. Offer bridging POP until this can be done.
- ▶ Women who have a target INR >3.5 or who are on higher than standard doses of LMWH could have their SDI fitted in the community setting.

- ▶ Women who have complex cardiac histories and in whom a vasovagal episode following IUC insertion could be problematic should ideally be discussed with cardiology and have their IUC fitted in a hospital setting.
- ▶ For IUC insertions, consider using a single tooth vulsellum or disposable Teale vulsellum (experience suggests less bleeding). Apply local pressure or silver nitrate sticks for any cervical bleeding.
- ▶ For SDI insertions, use local pressure or a skin stitch for wound site bleeding.
- ▶ After IUC insertions, observe the woman for 30 minutes and check pulse, blood pressure and blood loss before she leaves.
- ▶ Consider an ultrasound scan post-IUC insertion if the procedure was difficult or there is excessive or persistent pain.
- ▶ Advise against NSAIDs for pre- or post-procedure pain as they increase the risk of bleeding.
- ▶ Give women emergency contact details when they leave.

3.2 Stopping anticoagulants

The risk of significant bleeding in women using DOACs, warfarin (with a stable INR), LMWH or anti platelets is likely to be low. If anticoagulants are stopped there is a risk of clot formation which can have life threatening consequences. Routine warfarin, DOACs, LMWH and antiplatelet regimes should generally not be withheld or stopped for IUC and SDI insertions as the risk of clot formation outweighs the small risk of bleeding.

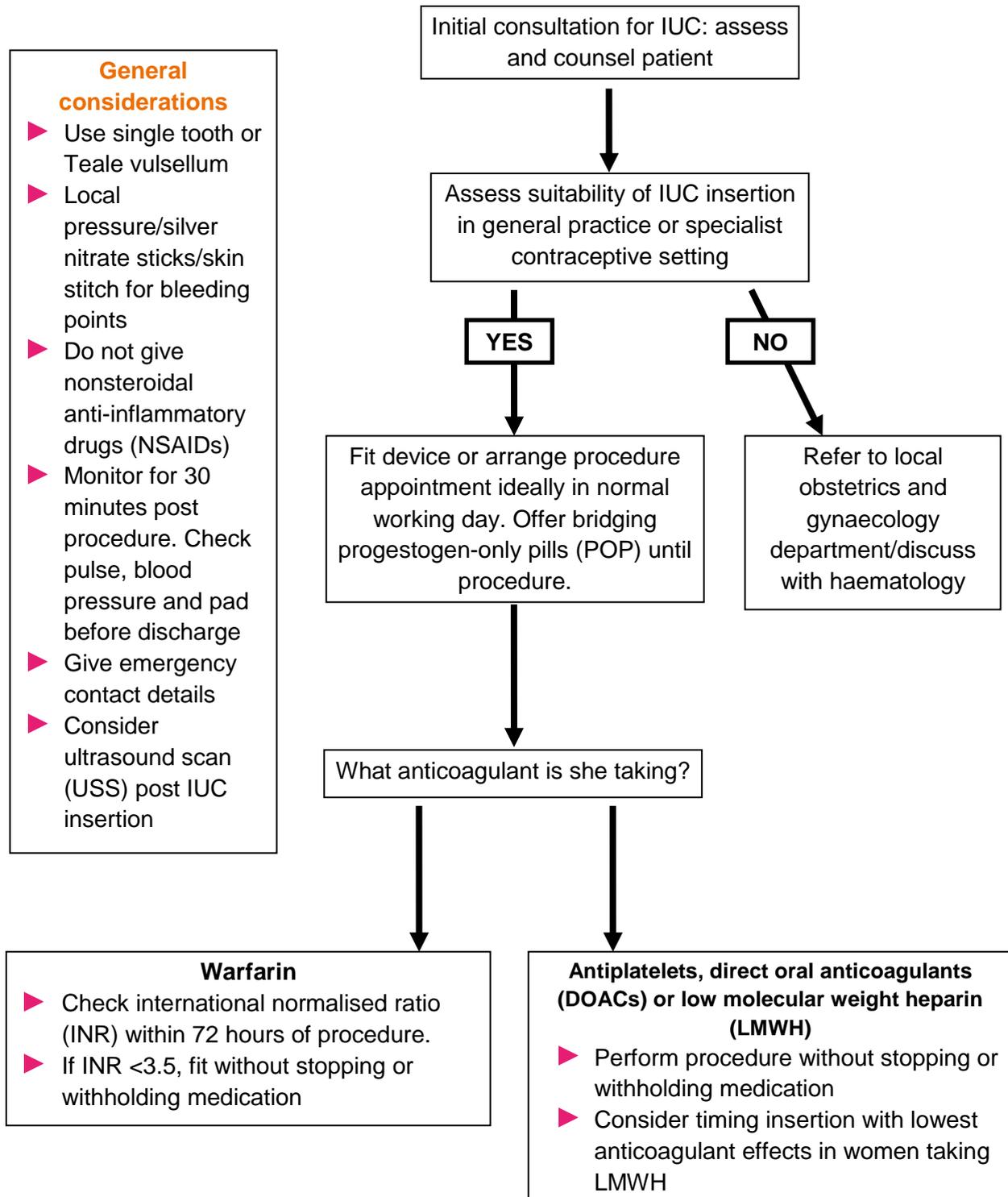
4. Emergency – haemodynamically compromised

If the patient is haemodynamically compromised or collapses:

- ▶ Call 999 immediately for emergency transfer to acute hospital
- ▶ Lie in head-down position
- ▶ Maintain airway
- ▶ Give high flow O₂
- ▶ Gain IV access and give fast IV fluids
- ▶ Vaginal pack or bimanual compression if appropriate to situation
- ▶ Alert on-call gynaecology and haematology.

An algorithm for insertion of IUC in women taking anticoagulants or antiplatelet medication can be found on the page next.

Algorithm for insertion of intrauterine contraception (IUC) in women taking anticoagulants or antiplatelet medication



References

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4. Culwell KR, Curtis KM. Use of contraceptive methods by women with current venous thrombosis on anticoagulant therapy: a systematic review. *Contraception* 2009; 80: 337-345
5. Kilic S, Yuksel B, Doganay M, *et. al.* The effect of levonorgestrel-releasing intrauterine device on menorrhagia in women taking anticoagulant medication after cardiac valve replacement. *Contraception* 2009; 80:152-157
6. Klaas Heinemann, Suzanne Reed, Sabine Moehner, *et. al.* Risk of Uterine Perforation with Levonorgestrel-Releasing and Copper Intrauterine Devices in the European Active Surveillance Study on Intrauterine Devices. *Contraception* 2015; 91: 274–279.

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