



Case report of uterine artery embolization for the management of acute abnormal uterine bleeding in the context of anticoagulant use

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Background

Abnormal uterine bleeding (AUB) is an increasingly common complication in women receiving non-vitamin K antagonist oral anticoagulants (NOACs) for thromboembolic disease¹. Therapeutic dilemmas arise in the setting of acute abnormal uterine bleeding and evidence-based recommendations are lacking. Management is based on individual risk profile² and is complicated by lack of reversal agents for many NOACs. Minimal literature exists regarding the use of uterine artery embolization (UAE) for the management of acute AUB in this context.

Case

A 45-year-old woman presented with 8 days of worsening severe per vaginal bleeding (PVB) following commencement of therapeutic dose of rivaroxaban for an extensive left lower limb occlusive deep vein thrombosis. Her past history included uterine fibroids, one previous caesarean section and a completed family. Observations showed hypotension 101/42mmHg and a postural drop of 40mmHg. Haemoglobin had decreased to 44g/L. Rivaroxaban was withheld and medroxyprogesterone was commenced. Bilateral UAE was performed within 24 hours (Figure 1). PVB ceased within 3 hours however the patient experienced persisting fevers following UAE. No infective source was identified. Her fevers were treated as a manifestation of post-embolisation syndrome (PES) for which she received dexamethasone and oxycodone. Unfractionated heparin was commenced day 1 post UAE.

Five units of packed red blood cells were given. Haemoglobin improved to 92g/L. She remained haemodynamically stable, her fevers resolved 72 hours post-UAE and she was discharged on therapeutic enoxaparin with a plan for an elective hysterectomy for definitive management.



Figure 1: Uterine artery embolisation

Discussion

Management of AUB in women receiving NOACs for thromboembolic disease should be individualised. Factors to consider include the degree of bleeding, haemodynamic stability, haemoglobin level, risk of recurrent venous thromboembolism, age and desire to maintain fertility.

In this case, UAE effectively managed acute AUB in the context of NOAC use. This minimally invasive modality allowed timely intervention without drug reversal, quick bleeding cessation, and timely reinstatement of therapeutic anticoagulation. Given the increasingly common use of NOACs, this modality may have an important role in managing AUB in women with active thromboembolic disease.

Reported risks of UAE in general include amenorrhoea, persistent vaginal discharge, PES, bilateral UAE failure³ and vascular access complications such as groin haematoma, contrast allergy and artery dissection⁴. This case demonstrates the management of PES; a self-limiting UAE complication which consists of fever, pain, nausea and malaise. While studies have shown the efficacy of dexamethasone in reducing surgical pain, nausea and inflammation, its use in UAE is less studied⁵. Here, dexamethasone in conjunction with oxycodone was effective. Further studies investigating risks of UAE in the context of AUB and NOAC use are required.

Little is known about the effects of UAE on future fertility and pregnancies. Studies examining fertility preservation in UAE for fibroids have demonstrated a substantial rate of subsequent fertility in women undergoing the procedure with an annual fertility rate after UAE of 33.3% in the whole study population and 62.5% among women intending to conceive (comparable to fertility rates post myomectomy)⁶. Further studies are necessary to build robust evidence in this area to inform decision making around UAE in women who wish to preserve fertility.

References

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