CASE REPORT

A cautionary tale on the use of antiplatelet treatment following TURP

Aileen Marie Murray,¹ Norah Keville,² Sam Gray²

¹Respiratory Department, Royal Victoria Hospital, Belfast, UK
²Urology Department, Ulster Hospital Dundonald, Belfast, UK

Correspondence to
 Dr Aileen Marie Murray,
 amurray33@qub.ac.uk

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SUMMARY

A pleasant 74-year-old man was discharged home following a complication-free transurethral resection of his prostate (TURP) and successful trial without catheter. Unfortunately, on postoperative day 6, he presented to A&E with chest pain requiring emergency intervention for a confirmed myocardial infarction. A drug-eluting stent was inserted into his right coronary artery and he was started on dual antiplatelet therapy of aspirin and clopidogrel. On day 7, the patient developed significant haematuria requiring transfusion and an obstructive uropathy, requiring an emergency laparotomy and 1 L of organised clot evacuation from his bladder. The dual antiplatelet treatment was restarted on day 4 postlaparotomy, following debate between both the cardiology and urology teams regarding its appropriate reintroduction. On day 7, he was rushed back to the theatre for a re-laparotomy after CT confirmed reaccumulation of clot following an acute deterioration at ward level. The patient made an excellent recovery and was discharged home with regular outpatient follow-up.

BACKGROUND

This case highlights how important medical history and background checks of patients can be, regardless of their emergency presentation.

In no way are these set of events rare or out of the ordinary with many different aspects for consideration. Urology patients are routinely not given low-molecular-weight heparin prophylactic injections during inpatient stays, as haematuria following intervention is often significant. One could argue that this puts them at risk of being in a pro-thrombotic state following temporary immobility combined with surgical intervention.

The on-going difficult debate between the Urology and Cardiology teams highlighted that there was not one, clear cut, correct answer; Both withholding and prescribing dual-antiplatelet therapy posed arguably equal risks to the patient. Unfortunately, a repeated laparotomy was required as reintroduction led to repeated bleeding and clot formation.

CASE PRESENTATION

A pleasant 74-year-old man with a history of hypertension and indwelling catheter for bladder outlet obstruction was admitted as an elective urology case for resection of his prostate. Using a transurethral approach, a middle lobe resection and prostatotomy was performed for massive benign prostatic hypertrophy, confirmed on histology.

Immediate postoperative recovery was uneventful and he was discharged home following a successful trial without catheter.

On day 6, he presented to A&E and was admitted medically under the care of the cardiology team with chest pain diagnosed as non-ST-elevation myocardial infarction requiring emergency intervention. A drug-eluting stent was employed to his right coronary artery and he was started on dual-antiplatelet therapy of aspirin and clopidogrel.

On day 7 his renal function deteriorated and he developed significant haematuria requiring transfusion, with care transferred to urology for manual bladder washout. He was subsequently taken to the theatre for attempted endoscopic management, which was unsuccessful with a resultant midline laparotomy, cystotomy, 1 L of mature clot evacuation and a suprapubic catheter insertion was required. Bladder irrigation continued in the intensive care unit before step-down to urology ward with all anticoagulants on hold.

INVESTIGATIONS

Initially, the acute deterioration of renal function was presumed to involve a pre-renal insult, of potential cardiogenic origin, given the patient's recent cardiovascular compromise. As marked haematuria continued however, the bladder was noted to be impenetrable to catheterisation. This, coupled with a falling haemoglobin, and progressive haemodynamic instability, was quickly recognised to be secondary to the recent urological intervention. The patient required emergency theatre, where obstructive renal failure was confirmed to be secondary to the huge, organised clot, removed from the urinary bladder. Of note, differential consideration and investigations, are not felt to be key learning points to take away from this case.

OUTCOME AND FOLLOW-UP

Care was shared by the urology and cardiology teams during this time, who debated the appropriate time of antiplatelet reintroduction. The original dual anti-platelet therapy restarted on day 4 following evacuation, as the postprocedure haematuria settled and the patient continued to improve. Unfortunately, on postoperative day 7, he reported increasing wound site pain, became hypotensive once more and a distended abdomen was noted, with CT regrettably confirming a reaccumulation of the clot and hydronephrosis (figure 1).

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Figure 1 CT of the pelvis showing organised clot within the urinary bladder.

A re-laparotomy and cystotomy was performed with 1 L of fresh clot removed and an oozing anterior prostate sutured for haemostasis.

The risk of stent thrombosis was balanced against the potential for further blood loss while the patient made an excellent recovery. The urology and cardiology teams concluded that all anticoagulation was to be held until day 6 when aspirin was cautiously re-introduced as a single agent prior to discharge. Following an outpatient cystogram showing no leakage at 3 weeks, clopidogrel was added, and this was followed by a successful trial without catheter. Thankfully today, he remains well with ongoing outpatient follow-up.

DISCUSSION

The use of dual-antiplatelet therapy following the insertion of drug-eluting stents, is now a standard practice to reduce stent thrombosis, in the year following percutaneous intervention with stent insertion.¹ Withholding such therapies in the peri-operative period, is also now a standard approach, in the aim to reduce haemorrhagic complications.² Although complications can and inevitably will occur, within any given treatment population the potential extent of such complications should never be overlooked when decisions are made regarding these treatments. Information regarding interventions in the recent past, or near future, should be readily available to those involved in

the patient's care, and a primary factor in the decision making process of medication prescription.³

Cases commonly report haemorrhage at vascular sites, intracranially and within the gastrointestinal tract.¹ No *BMJ* cases have shown a specific case of TURP-related haemorrhage as significant as in the above patient in this cardiac cohort currently on antiplatelet treatment. There is also little information about specific guidelines about the length of time to withhold such medication both in the preoperative, perioperative and post-operative period.

It is stated that emergency bleeding complications require a multidisciplinary assessment to balance bleeding versus long-term vascular risks.¹ However, as highlighted in the case of this patient, there was ongoing debate about the timely reintroduction of the dual-antiplatelet treatment between the urology and cardiology teams, unfortunately resulting in a repeated laparotomy within a 1 week period, with significant morbidity and risk for the patient involved.

Overall, it is clear that further research and case analysis are required for definitive guidelines in all aspects of these extremely common but dangerous drugs used today. They have ongoing significant effects and consideration needs to be taken in the multitude of medical and surgical specialties involved.

Learning points

- ▶ To study the importance of patients' background, medical history and recent interventions.
- ▶ Recognition and awareness of pro-thrombotic and haemophilic states in patients, with regard to the giving and withholding of associated drugs.
- ▶ Assessing risk/benefit between the medical and surgical specialties with regard to antiplatelet therapy.

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Competing interests None.

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