

The RE-ALIGN trial compared dabigatran with warfarin in patients with mechanical heart valves but was terminated prematurely because of excess thromboembolic and haemorrhagic events in the dabigatran arm (Eikelboom et al, 2013). Other direct oral anticoagulants may be effective, but there will be no substitute for vitamin K antagonists in patients with mechanical heart valves for the foreseeable future.

A meta-analysis comparing trial and real-world data on haemorrhagic complications of direct oral anticoagulants and vitamin K antagonists in patients with non-mechanical heart valves found fewer haemorrhagic complications with direct oral anticoagulants (Chai-Adisaksotha et al, 2014). At the time the current patient was being treated, based on consensus and the experience of the treating clinicians, apixaban was commenced. Real-world data suggest that, of the direct oral anticoagulants, apixaban has a better bleeding profile (Lip et al, 2016).

It is hoped that this article may pave the way for future trials on factor Xa inhibitors as this patient remained free from thromboembolic events close to 2.5 years after initiation of apixaban. **BJHM**

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LEARNING POINTS

- Patients with a mechanical heart valve require lifelong thromboprophylaxis using a vitamin K antagonist.
- Direct oral anticoagulants are not licensed for use in patients with mechanical heart valves, but this case may encourage trials of factor Xa inhibitors in these patients.
- Internet medicine is informative but can lead patients to making unwise decisions.
- Imparting effective medical information to patients may avoid unnecessary internet consultation.

world comparison of major bleeding risk among non-valvular atrial fibrillation patients initiated on apixaban, dabigatran, rivaroxaban, or warfarin. *Thromb Haemost*. 2016 Aug 19;116(5):975–986. <https://doi.org/10.1160/TH16-05-0403>

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Images in Medicine

Giant hydronephrosis presenting as acute pyelonephritis

A usually fit and well 49-year-old man presented to hospital with a 5-day history of malaise and suprapubic pain. Clinical examination revealed tenderness and fullness of the right flank. Urine dipstick was positive for nitrites and leukocytes. Blood tests revealed raised C-reactive protein (294 mg/litre), creatinine (136 µmol/litre) and urea (10.2 mmol/litre) levels. The patient was treated with intravenous piperacillin-tazobactam.

Ultrasound of the renal system revealed a large fluid-filled mass confirmed on computed tomography as a giant hydronephrotic right

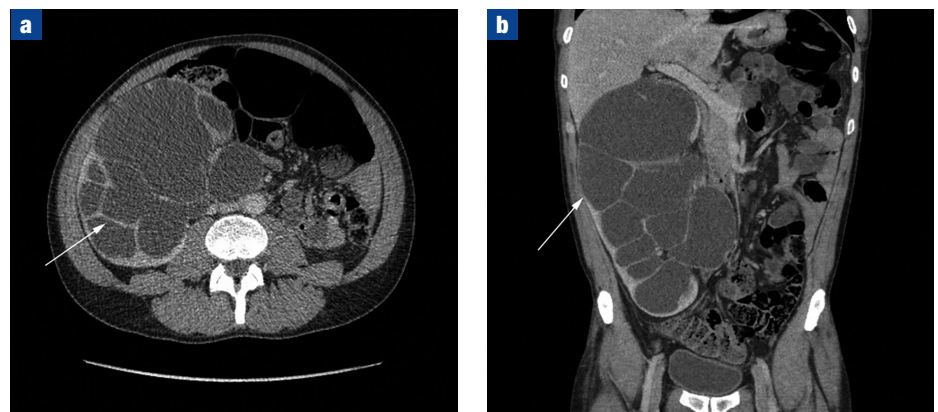
kidney (*Figure 1*). Radionuclide scan of the right kidney revealed poor function. Laparoscopic nephrectomy was performed 3 months later with an uneventful recovery. The patient has now returned to work.

Giant hydronephrosis is defined as a kidney with more than 1 litre of fluid accumulated in the renal collecting duct (Stirling, 1939) and in the majority of adult cases arises as a result

of chronic obstruction at the pelviureteric junction (Sataa et al, 2011). **BJHM**

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Figure 1. a. Axial and **(b)** coronal image from computed tomography of the abdomen showing giant septated right kidney with marked cortical thinning (arrows), measuring 13x19x25 cm.



Dr Pawel Obrocki, Academic Foundation Trainee, Department of Medicine, West Suffolk Hospital, West Suffolk NHS Foundation Trust, Bury St Edmunds

Dr Joseph Yikona, Consultant in Elderly Medicine, Acute Medical Unit, West Suffolk Hospital, West Suffolk NHS Foundation Trust, Bury St Edmunds IP33 2QZ

Correspondence to: Dr J Yikona (joseph.yikona@wsh.nhs.uk)