

Unusual complication of coronary angiography with retroperitoneal hemorrhage

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Correct answer is C. Right renal artery

Digital subtraction angiography showed dye extravasation at the right segmental renal artery and we attempted to selective embolization of the perforated segmental artery. With a 6F Judkins Right 4 guiding catheter was positioned into bleeding segmental renal artery (Fig. 3A). A 2.4F microcatheter was advanced over the

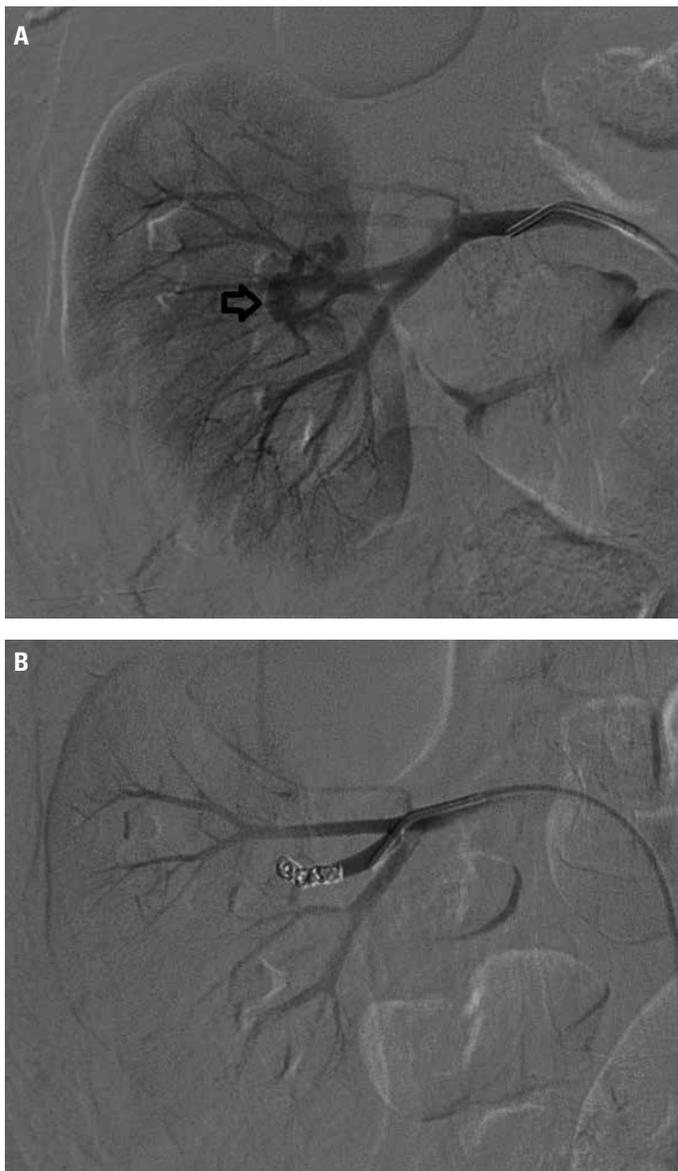


Figure 3. (A) With a 6F Judkins Right 4 guiding catheter was positioned into bleeding segmental renal artery, arrow shows extravasation of dye (B) Platinum coils were selectively embolized through microcatheter into the bleeding segmental artery

guide wire, the wire was removed and platinum coils were selectively embolized through microcatheter into the bleeding segmental artery (Fig. 3B). Following the procedure stabilization of hemoglobin level and hemodynamic improvement were observed. The patient was discharged on day 21 in good general condition with normal creatinine and hemoglobin levels.

One of the major indications for renal artery embolization is iatrogenic renal artery bleeding. Iatrogenic renal artery bleeding has been described as a complication of anticoagulant therapy, cardiac catheterization, vascular renal intervention and urologic instrumentation. The exact etiology of the hemorrhage remains speculative however the main possible mechanism in this patient is during manipulation hydrophilic guidewire has been accidentally advanced into the right renal artery leading to direct perforation of vessel.

In case of renal artery injury, if clinical symptoms or a relevant hemoglobin decrease of more than 2 gm/dL occurs and signs of active arterial bleeding are present on CT, transarterial embolization should be the next step when the clinical course permits (1). While bleeding from segmental or sub-segmental branches, super selective embolization has become the treatment of choice with success rate ranging from 93% to 100% (2). Super-selective embolization can provide controlled occlusion of specific small renal artery branches with minimal compromise of surrounding normal vasculature and results in infarction of less than 10% of the renal parenchyma, which is not associated with clinically significant reduction in renal function (3). Major complications of the technique are incomplete embolization, coil migration leading to injury of adjacent organs and post-infarction syndrome. Nowadays, the use of new microvascular catheters and microcoils has refined the technique reducing iatrogenic morbidity.

Renal artery bleeding is an extremely rare complication of coronary angiography. Super selective embolization represents an efficacious and definitive therapy of this life threatening hemorrhage.

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