

ABSTRACT

Introduction: We report a case of renal ischemia presented as acute abdominal pain 18 months after EVAR.

Case presentation: A 49-year-old white male, presented to our emergency department for severe back and abdominal pain. He had previously undergone an EVAR procedure 18 months ago because of a 6.5 cm diameter asymptomatic infrarenal abdominal aortic aneurysm. A CT aortogram revealed thrombosis of left accessory renal artery and low mesenteric artery, with segmental left renal hypoperfusion. There was observed no graft migration and aneurysmal diameter progression. Renal function was normal. Patient did not receive any new surgical or endovascular treatment and he was successfully treated conservative.

Conclusion: Renal injury (RI) is an important post-operative complication that may impact on mortality, morbidity, and cost of treatment. Renal injury after EVAR is common and is associated with increased mortality and morbidity. Further studies are required to assess the impact of RI on longer term results and examine preventive strategies.

BACKGROUND

Segmental renal infarction is a relatively known and common outcome (0 to 84%) in patients with accessory renal artery (ARA) covered with EVAR(1). Accordingly to some studies loss of renal mass after coverage of ARAs in EVAR is not associated with functional renal impairment.(1)

PURPOSE

The main purpose to present this case is to help to establish safe treatment recommendations in EVAR planning and treatment in patients with accessory renal artery (ARA).

METHODS

- A 49-year old patient was admitted to our department with acute abdominal and back pain. At admission, vital signs were stable.

- In his medical history was that he underwent EVAR 18 months before admittance.

RESULTS

- Initial radiological assessment (CTA) verified acute segmental renal infarction of left kidney with good position of endograft with no endoleak. Low mesenteric artery was also occluded.
- Renal function was monitored (glomerular filtration, serum urea and creatinine)
- Creatinine levels were slightly altered on day of admittance (154 umol/L)
- Conservative approach with close monitoring was recommended (hydration and no nephrotoxic substances, LMWH)

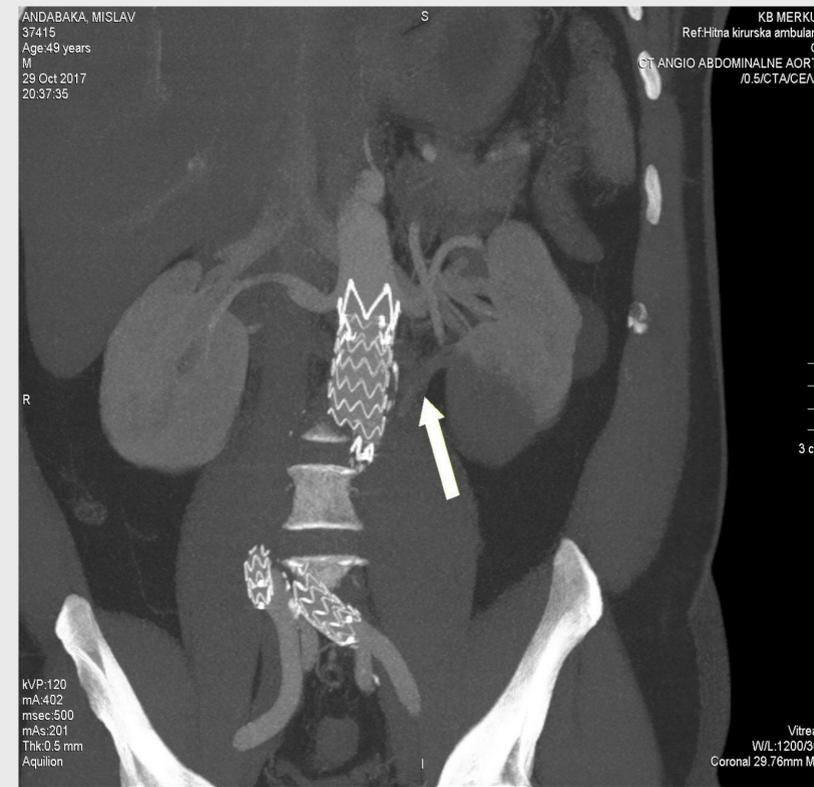
Figure 1: A contrast enhanced computed tomography (CT) one month before renal ischemia (routine 12 month control)



RESULTS

- During hospitalization CT scans were performed on 1st, and 6th day.
- There was no larger zone of infarction present (60 mm), renal function was normal and patient had no abdominal pain
- Serum urea and creatinine levels were normal on day of release from hospital
- Throughout the follow-up period (12months) the treatment course was uneventful.

Figure 2&3: A contrast enhanced computed tomography (CT) on a day of admittance



RESULTS



CONCLUSION

- Even though segmental renal infarction may occur in a considerable number of patients as a result of ARA exclusion, it does not seem to be associated with adverse clinical effects, such as renal failure and change in hypertensive status.(1)
- The decrease in renal function was more pronounced in patients with ARA after EVAR when compared with patients without ARA undergoing EVAR (2)
- To prevent a critical decrease in renal function, one should be alert to avoid nephrotoxic substances in those patients (2)
- Only significant predictor on AKI was serum creatinine before EVAR (3)

DISCLOSURES

The Authors declare that there is no conflict of interest.

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