

## CVIR award 2012-2013: Dr H. Westerlinck



### An unusual complication after renal biopsy\*

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Major complications after renal biopsy are those that don't resolve spontaneously and are in need of an intervention (blood transfusion, angiography, cystoscopy, etc.). They occur in only 6,4% of the cases and include massive hematuria, hematoma, arteriovenous fistula, renal obstruction, acute renal failure, hemoglobin drop or septicemia.

A prospective study has shown that in 90% of the patients a perinephric hematoma can be found after renal biopsy. However, only 6% of these are clinically significant (1).

In our case report a 65-year-old man with progressive chronic renal failure underwent a flawless ultrasound-guided renal biopsy to exclude Alport syndrome and primary glomerulonephritis. The following hours the patient developed severe backpain. A CT-scan with intravenous contrast showed a large left-sided perinephric hematoma and contrast extravasation within this hematoma (Fig. 1). A diagnostic and therapeutic angiography was performed. Selective catheterisation of the left renal artery however showed no extravasation. Looking further, selective catheterisation of the first left lumbar artery demonstrated extravasation out of the muscular branch. Another important finding was the artery of Adamkiewicz originating from this lumbar artery (Fig. 2). Only 5 similar case reports are found in literature. This anatomical variant, the lumbar origin of the artery of Adamkiewicz, is only seen in 8-10% of the population (2, 3). Obstruction of the blood flow in this artery can lead to paraplegia. Because particle embolization of the lumbar artery may contaminate the Adamkiewicz artery, hyper selective occlusion of the lumbar artery distal of the origin of the radiculospinal artery was performed using micro coils.

#### Conclusion

Two important conclusions can be drawn. First: look further: when an acute bleeding is suspected after renal biopsy, it's not always a renal bleeding, the muscular branch of the lumbar artery runs dorsal of the kidney and can be affected. Second: look good: in 8-10% of the population the artery of Adamkiewicz originates from the lumbar artery and it should be avoided to worsen a complication by a new complication.

#### References

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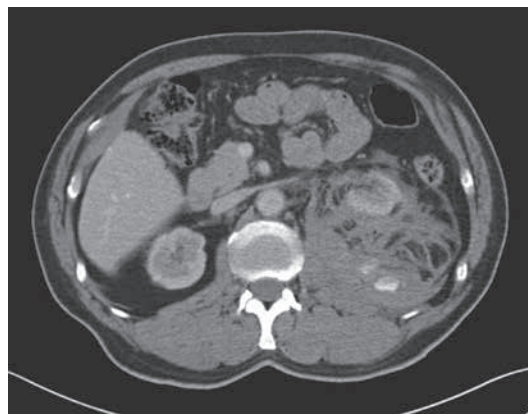


Fig. 1. — CT-scan after intravenous contrast in venous phase: visualisation of a large left-sided perinephric hematoma and contrast extravasation within the hematoma.

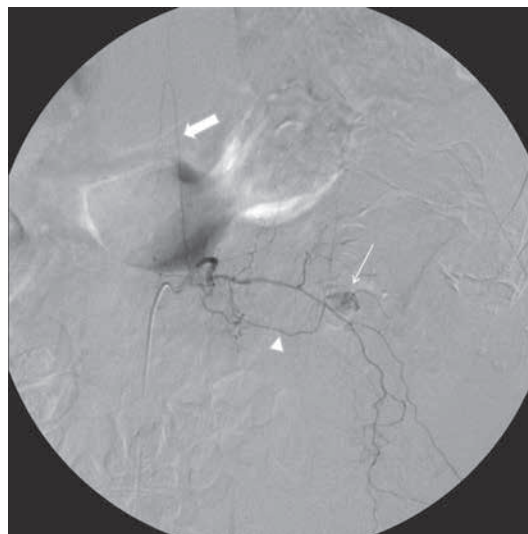


Fig. 2. — Diagnostic and therapeutic angiography shows extravasation of contrast (fine arrow) out of the muscular branch (arrowhead) of the first, left lumbar artery. The artery of Adamkiewicz (thick arrow) also originates from this artery.

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