Transplant Nephrectomy for a Large AV Fistula following Renal Biopsy

H.	Hatem	Mansy ^a
A.	Abdulla	Khalil ^a
M.	Mohamed	Bafaqeeh ^a
J.	Jacob	Naucier ^b
S.	Saad	Al-Dusari ^a
Z.H.	Zain H.	Al-Shareef ^b
S.	Saud	Al-Shlash ^b
P.	Philip	Filobbos ^b

Departments of ^aNephrology and ^bSurgery, North West Armed Forces Hospital, Tabuk, Saudi Arabia

Dr. H. Mansy, MD (UK), MRCP, North West Armed Forces Hospital, Department of Internal Medicine, PO Box 100, Tabuk (Saudi Arabia)

to deteriorate, requiring dialysis and RTX nephrectomy. Histological examination showed generalized congestion and foci of hemorrhage with an area of moderate dense lymphocytic infiltration. The veins showed various mild degrees of dilatation but the arteries showed very marked myofibroin-farct and obliteration of the lumina. The glomeruli hardly showed any changes. The vascular changes were compatible with AV fistula.

Dear Sir,

Renal biopsy is a vital tool in the diagnosis and management of renal disease [1]. The mortality associated with renal biopsy is less than 0.1%, but there is a more frequent increase in morbidity [2-4]. We report a case of large AV fistula following renal biopsy in a renal transplant (RTX) patient.

A 26-year-old male Saudi patient, known case of CRF of unknown etiology, underwent living nonrelated RTX in India (no report of HLA compatibility or lymphocytic cross-match). He was admitted to RC Hospital for investigation of steroid-resistant rejection episode. He underwent renal biopsy and was found to have chronic rejection (of vascular type) and focal interstitial nephritis. He was transferred to NWAFFH in Tabuk 6 weeks later with fluid overload, resistant hypertension, progressive deterioration of his renal function (serum creatinine 488 mmol/l). Examination showed tender RTX with marked thrill and continuous bruit over the RTX. Clinical diagnosis of AV shunt in renal transplant following renal biopsy was made. Renal perfusion scan showed marked increase intrarenal blood flow with poor renal function. Ultrasound with Doppler examination showed a unique picture consistent with intrarenal AV shunt and relative ischemia in some parts. Renal arteriogram (fig. 1) confirmed the presence of a large shunt between the renal artery and vein and saccular aneurysm. The patient was transferred to KFS Hospital for embolization of the AV fistula but it was not possible because of its large size. His renal function continued

Fig. 1. Renal arteriogram showing the presence of large shunt between renal artery and vein.

A less common complication of renal biopsy is AV fistula formation and aneurysm [5]. However, it is interesting to note that AV fistula can be demonstrated by arteriogram [6] in 10-15% of patients following renal biopsy. They are usually clinically silent and more than 95% spontaneously resolve within 2 years [7]. Preliminary investigations in this patient excluded obstruction, infection and cyclosporin toxicity. In this case we would like to highlight the potential risk of

this complication as many nephrologists may undertake renal biopsy prior to localizing [8,9] the depth of the upper pole by ultrasound scan and usually do it on the ward since RTX is easily palpable. Clearly this AV fistula and aneurysm were large enough to cause a significant degree of vascular steal rendering the kidney ischemic. It was not possible to close the AV shunt, either surgically or radiologically by embolization [8]. Renal biopsy remains a gold standard to confirm the diagnosis of rejection, and to exclude other causes of impaired renal function in spite of its potential complications; however, ultrasound scan prior to renal biopsy is essential to localize the depths of the upper pole of the kidney and to avoid such complication.

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