Renal transplantation is the therapeutic modality of choice for patients with end-stage renal disease (ESRD) from a variety of causes. However, the transplantation of the allografts entails considerable risks to the recipients, emanating mostly from life-long use of immunosuppressive agents. One of the major risks includes an increased predisposition to infections in the transplant recipients. These infections may be caused by a variety of infective organisms including bacteria, viruses, fungi, and parasitic agents and involve an equally variable number of body tissues, including the graft itself.

Parasitic diseases are not uncommonly reported in renal transplant recipients, especially from developing countries. The parasites can involve a variety of organs, including the native kidneys of renal transplant recipients. One of the parasitic zoonosis in tropical regions rarely involving the kidneys is the echinococcosis (hydatidosis). Isolated renal hydatidosis is rare, and similar occurrence in renal transplant patients is further rarer. The only previous case in published literature was reported from Turkey by Cavdar et al. The current case report by Bhat et al. represents, to the best of our knowledge, the second case in the world literature. There are some interesting similarities and other contrasts between the two cases. Both affected middle-aged male patients, and both cases involved the native rather than the transplanted kidneys of the renal transplant recipients. In both cases, there was no evidence of the parasitic infection at the time of transplantation. The present case, however, presented one year earlier (one year after transplantation) than the case reported by Cavdar et al., and the size of the lesion was also larger. As a result, the lesion was symptomatic and palpable in the present case as opposed to the previously reported case. The authors attribute this occurrence to the use of immunosuppressants in the patient. However, it is difficult to establish the cause and effect relationship on the basis of just one case. Similarly, the pathogenesis and risk factors cannot be determined from the study of just a single case.

The authors of the present report deserve compliments on bringing forth an interesting case with some learning points for relevant health care professionals involved in the care of the renal transplant patients. Hydatid disease should be considered in the differential diagnosis of any cystic or cystic-cum-solid lesions of native or transplanted kidneys in renal transplant recipients, especially in endemic areas. Pre-operative diagnosis is possible, as in this case, with a combination of serology, ultrasound, CT scanning and clinical data and a high index of suspicion. Medical treatment alone in transplant setting appears to be ineffective, as in the present case, and aggressive approach needs to be taken. The case is also unique in that it presented with spontaneous rupture with gross hydatiduria and a rapid increase in size. The role of the immunosuppressants in predisposing or causing aggressive growth of the lesion is at best speculative.

There are a few omissions in the present case. No source of the allograft kidney is given as is the information on immunosuppressive regimen used. These may represent a risk factor for the development of hydatidosis of the kidney. There is also no information on the follow-up of the patient, as sometimes hydatid disease can recur, often in other sites, long after primary nephrectomy. There is little information on the natural history of the disease in transplant setting. There is no follow-up data in both the reported cases in the literature. The patient in the case report of Cavdar et al. underwent native nephrectomy straight away but the latter option was refused by the patient in the current case. As a result, the patient presented with a larger and ruptured lesion 3 years later. It seems that albendazole and the puncture, aspiration, instillation, and re-aspiration (PAIR) strategy did not work in the transplant setting. The optimal duration of chemotherapy is also not known in transplant patients.

In conclusion, the current case highlights the need to consider hydatid disease in the differential diagnosis of cystic or cystic-cum-solid lesions of the native or transplanted kidneys in renal transplant patients. The case also underscores the need for an aggressive approach for the treatment of the disease in this setting as a delay can lead to complications such as rupture.
Mubarak: Native renal hydatidosis in transplantation

Muhammed Mubarak
Department of Histopathology, Sindh Institute of Urology and Transplantation, Karachi - 74200, Pakistan

Address for correspondence:
Prof. Muhammed Mubarak,
Department of Histopathology, Sindh Institute of Urology and Transplantation, Karachi - 74200, Pakistan.
E-mail: drmubaraksiut@yahoo.com

REFERENCES

1. Kazi JI, Mubarak M. Biopsy findings in renal allograft dysfunction in a live related renal transplant program. J Transplant Technol Res 2012;2:108.
2. Barsoum RS. Parasitic infections in transplant recipients. Nat Clin Pract Nephrol 2006;2:490-503.
3. Horchani A, Nouira Y, Kbaier I, Attyaoui F, Zrbi AS. Hydatid cyst of the kidney. A report of 147 controlled cases. Eur Urol 2000;38:461-7.
4. Ozbay I, Aksoy Y, Biçgi O, Polat O. Hydatid disease of the urinary tract: Review of the management of 9 cases. Int Urol Nephrol 2001;33:329-34.
5. Zmerli S, Ayed M, Horchani A, Chami I, El Ouakdi M, Ben Slama MR. Hydatid cyst of the kidney: Diagnosis and treatment. World J Surg 2001;25:68-74.
6. Perimenis P, Athanasopoulos A, Gytopoulos K, Barbalias G. Primary echinococcal disease of the kidney: The case for a more conservative approach. Int Urol Nephrol 2001;32:609-13.
7. Göğüş C, Safak M, Baltaci S, Türkölmez K. Isolated renal hydatidosis: Experience with 20 cases. J Urol 2003;169:186-9.
8. Huang M, Zheng H. Clinical and demographic characteristics of patients with urinary tract hydatid disease. PLoS One 2012;7:e47657.
9. Cavdar C, Celik A, Saglam F, Toprak O, Gungor O, Tuna B, et al. Isolated hydatid disease of the native kidney in a renal transplant recipient. Nephrol Dial Transplant 2007;22:656-7.
10. Bhat RA, Wani I, Khan I, Wani M. Renal allograft transplant recipient with ruptured hydatid native kidney. Urol Ann 2014;6:267-9.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

How to cite this article: Mubarak M. Isolated native renal hydatidosis in a renal transplant patient: The case for an aggressive approach. Urol Ann 2018;10:421-2.