

## Normal black kidney: a case report

<sup>1</sup> Aliasghar Yarmohamadi  
<sup>2</sup> Alireza Akhavan Rezayat  
<sup>3</sup> Bahram Memar  
<sup>4</sup> Hamidreza Rahimi  
<sup>5</sup> Cand P  
<sup>6</sup> Arash Akhavan Rezayat  
<sup>7</sup> Mohammad Ramezani\*

1,2- Department of Urology, Ghaem Educational General Hospital, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

3,4- Surgical Oncology Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

5,6,7- Student Research committee, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

\* Student Research committee, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran  
 Email: ramezanimh931@mums.ac.ir

### Abstract

**Introduction:** A black kidney has 3 major differential diagnoses: hemosiderosis, lipofuscin pigment and melanotic renal cell carcinoma. Excluding lipofuscin, the other 2 are accompanied by an abnormal renal function.

**Case report:** We report on a 25-year-old man who intended to donate a kidney to his cousin. On the operating room table when we incised the left flank region and exposed the kidney, we found a firm and black kidney so the operation was cancelled due to potential vascular injuries. Days after the incomplete procedure, we reviewed the donor's biochemistry and imaging to reassess his renal function, but the results showed quite normal renal function again. The result of Ham test was also negative. Two weeks later, we began the operation, removed the same left kidney and found that it was in the same conditions as it was before. We took the opportunity to send needle biopsies of the kidney for histopathologic analysis. The analysis showed a melanotic kidney without pathological changes in glomeruli and interstitium and vessels.

**Conclusion:** A black kidney may result in hemosiderin, lipofuscin or melanin deposits in the kidney, which can confirm the diagnosis; however, special tests for underlying disease and renal function should be considered. Some causes of black kidney lead to abnormal function, but our patients' kidney returned to normal.

**Key words:** Black Kidney, hemosiderosis, lipofuscin pigment, melanotic renal cell carcinoma