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Managing A Large Staghorn Stone In A Doughnut Kidney: A Case Report

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A B S T R A C T

Doughnut or Pancake kidney is a condition in which both the kidneys fused at the medial borders of each pole to produce a ring-shaped mass. In addition to nonspecific lower abdomen discomfort, pyrexia and haematuria, signs of a urinary tract infection may also be present in an otherwise asymptomatic pancake kidney. Sometimes the diagnosis is coincidental. However different imaging modalities like USG, MDCT, computed tomography (CT) urography, and radio nucleotide scanning are use confirmed the diagnosis. Different surgical options such as open pyelolithotomy, laparoscopic or robot assisted pyelolithotomy can be consumed to treat such patient, however the literature proposes that an open pyelolithotomy is a safer and more rational approach to avoid injury to any aberrant vessels which are more common in such cases.

KeyWord: Doughnut Kidney, Renal Stone, Pyelolithotomy

Introduction

A disease called as "pancake kidney" or "doughnut kidney" occurs when both kidneys merge together at the medial borders of each pole, resulting in a ring-shaped mass (1). Less than 30 instances of this exceedingly unusual mutation, in which the upper and lower poles are fused and the renal capsule is lacking, have been recorded in the literature2. Usually, they are situated in front of the aorta. A range of issues, including infections, stone disease, and a variety of benign and malignant cancers, may develop from renal fusion disorders. (2,3) These days, the gold standard therapy for renal stones bigger than 2.0 cm is still percutaneous nephrolithotomy (PCNL), one of the least invasive endourological methods used to address renal stone disease (4). Nevertheless, these procedures are typically not applicable in all situations owing to the infrequent occurrence of large stones in aberrant renal moiety. Therefore, one must revert to more classic open surgical methods, such open pyelolithotomy, in such unique conditions. The literature has also defined standard laparoscopic procedures as a surgical management (5) Because renal anomalies usually accompany associated aberrant vasculature, addressing these problems surgically may be hard. Here, we present a case of renal stone disease treated effectively with open pyelolithotomy owing to an ectopic pelvic pancake kidney. To the best of our knowledge, this is the only incidence like that that has been reported in our region.

Authors Contribution
AH. Concept & Design of Study AND Drafting**LA**. Data Analysis and **.** Critical Review , **LA**.Final Approval of version

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Case Presentation:

At age 35, a previously healthy male began experiencing chronic lower abdominal pain and dysuria. Physical examination showed nothing out of the ordinary other than mild tenderness in the lower abdomen. Urinalysis found albuminuria, pus cells, and red blood corpuscles. X-ray KUB turned up suggestive signs for obstruction and a nortant radioopaque shadow could be observed in the left lower pelvis. On further examination with ultrasonography and then abdominopelvic MDCT, a large staghorn stone was seen in the superior calyx of a pancake kidney compound nephron. The patient was treated with left open pyelolithotomy via a left Gibson incision, and the rock was retrieved in full without difficulties. In postoperative follow-up the patient's symptoms disappeared, so he was discharged with medication and told to come back for reassessment two weeks later. This case of pancake kidney suggests that thorough diagnostic work-up with individualized surgical treatment can meet the special requirements for complicated urological deformities.

Figure 1: An Xray Kub Showed A Large Radio Opaque Shadow In Lower Pelvic Region

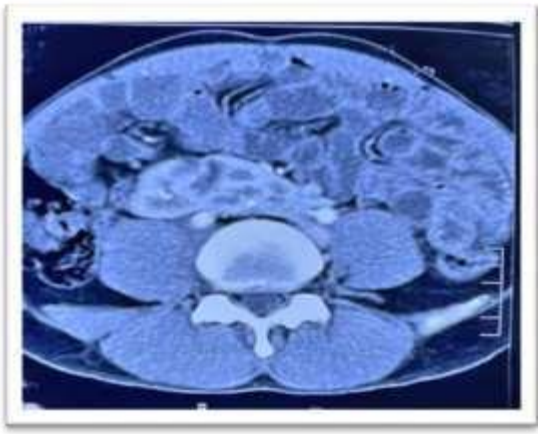


Figure 2: An Abdominopelvic Computed Tomography Scan Showing Fused Kidneys

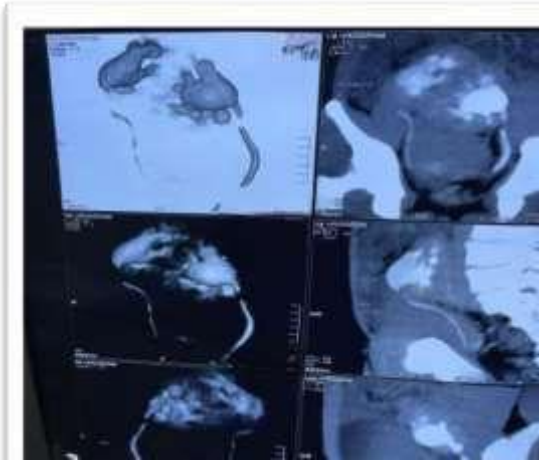
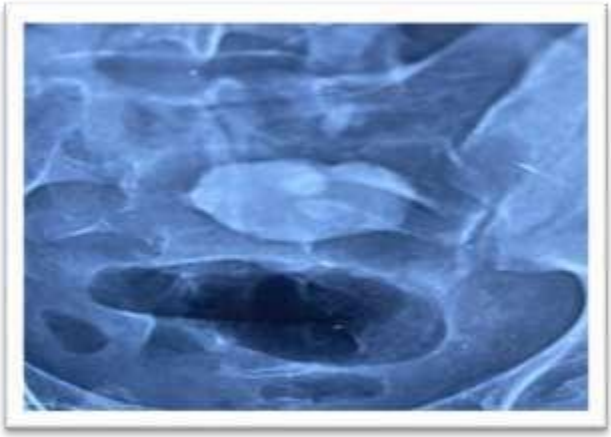


FIGURE 3: A CT Uro-gram with 3D reconstruction findings is consistent with doughnut kidneys

Figure 4: A Large Staghorn Stone That Has Been Retrieved



Discussion

Notorious for its uncommon convolution in the anatomy and accompanying complications, pancake kidney is a fully fledged congenital anomaly that presents patients with unique challenges both during diagnosis multi composing costs.,.,., clinical practice. Moreover for example, on by side tables, sometimes from which both sides as well as the middle section could be fitted but at different times. In the present case, chronic lower abdominal discomfort, often for years accompanied by dysuria and a Chief complaint of their own, combined with the findings from imaging showing large staghorn stone within the combined kidneys, necessitated a comprehensive diagnostic process. Utilization of various imaging methods, such as KUB (X-ray diffraction analysis) of all meridians and longlatituydinVISBie, ultrasonography, and abdominopelvic MDCT, was crucial in diagnostic confirmation and accounting for the anatomy of pancake kidney (6,7). These methods refined our understanding of the renal anomaly's size, position, and shape. They thereby provided reliable data as to how to continue making good decisions for the appropriate surgical approach Open pyelolithotomy was selected as the surgical treatment of choice, given thebig renal stone within pisiform kidneys and difficulties posed by Size (8). This approach made careful stone extractions while helping to minimize damage of neighboring tissue due especially cul.Periaberrant vessels that inappropriately are commonly associated with malformations involving the combination of kidneys. Another successful open pyelolithotomy conducted by us shows how well excellent the method is for such combined cases.. indeed, during this one bipolar electrocautery was used instead of laser. Furthermore a postoperative follow-up of this patient proves that timely therapy can restore normal renal function. Indeed half year later he was no longer symptomatic for stone disease. This underscores again the importanceofintervention sincecomplications resulting from an untreated kidney stone which are not treated can lead to further exquisite formative and functional problems; we had better start working in titanium if we don't want our profession to become extinct altogether(9). Overall, the case illustrates well how complex urological anomalies such as pancake kidney require a combined effort from radiologists, surgeons, and urologists for effective treatment. Also with continued work by clinicians we should be able to track down the optimal diagnostic and therapeutic strategies further elucid examples etc of rare hoodof renal fusion disorders in these patients. arduous endeavor, and pancake kidney, commonly called as doughnut kidney, is an extraordinarily unusual illness. While various

Conclusion

Managing a big staghorn stone is an exceedingly

surgical options, including laparoscopic, robot-assisted, and open pyelolithotomy, can be used to treat these patients, the literature suggests that an open pyelolithotomy is a safer and moresensible method to prevent damage to any aberrant vessels, which are more common in these cases. Additionally, our case study may serve as a guide. for the entire urological community to handle such complex instances. Financial disclosure: No monetary sponsor was acquired for this research.

Conflict of interest: There is no conflict of interest to disclose.

References:

1. Glenn JF. Fused pelvic kidney. J Urol. 1958 Jul;80(1):7- 9.
2. Türkvatan A, Olçer T, Cumhur T. Multidetector CT urography of renal fusion anomalies. Diagn Interv Radiol. 2009;15(2):127–34.
3. Dilli A, Ayaz UY, Tatar IG, et al. Pancake kidney in a geriatric patient: radiologic and scintigraphic findings. J Fac Med Ank. 2010;63:107–9.
4. Badani K, Hemal A, Fumo M, et al. Robotic extended pyelolithotomy for treatment of renal calculi: a feasibility study. World J Urol. 2006;24(2):198–201.
5. Bozkurt I, Cirakoglu A, Ozer S. Retroperitoneal laparoscopic pyelolithotomy in an ectopic pelvic kidney. JSLS. 2012;16(2):325–328.
6. Miclaus GD, Pupca G, Gabriel A, Matusz P, Loukas M. Right lump kidney with varied vasculature and urinary system revealed by multidetector computed tomographic (MDCT) angiography. Surg Radiol Anat. 2015;37:859–65.
7. Chavis CV, Harry C, Press HC, Gumbs RV. Fused pelvic kidneys: case report. J Natl Med Assoc. 1992;84(12):980–2.
8. Hollis HW Jr, Rutherford RB, Crawford GJ, Cleland BP, Marx WH, Clark JR. Abdominal aortic aneurysm repair in patients with pelvic kidney: technical considerations and literature review. J Vasc Surg. 1989;9(3):404–9.
9. Rao B, Nagaraju RM. Multidetector
10. computed tomography urography in pancake kidney: a rare case. J Evid Based Med Healthc. 2015;2(49):2014–7.