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A CASE REPORT

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 fuse 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 used to confirm the diagnosis. Other surgical options, such as open pyelolithotomy, laparoscopic, or robot-assisted pyelolithotomy, can be consumed to treat such patients. 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.

Keywords: Doughnut Kidney, Renal Stone, Pyelolithotomy

Introduction

A disease called a "pancake kidney" or "doughnut kidney" occurs when both kidneys merge 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 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 the aberrant renal moiety. Therefore, one must revert to more classic open surgical methods, such as open pyelolithotomy, in such unique conditions. The literature has also defined standard laparoscopic procedures as surgical management (5). Because renal anomalies usually accompany associated aberrant vasculature, addressing these problems surgically may be difficult. 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.

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MANAGING A LARGE STAGHORN STONE….

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 of obstruction, and an important 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- 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 a 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 the Lower Pelvic Region

Figure 2: An Abdominopelvic Computed Tomography Scan Showing Fused Kidneys

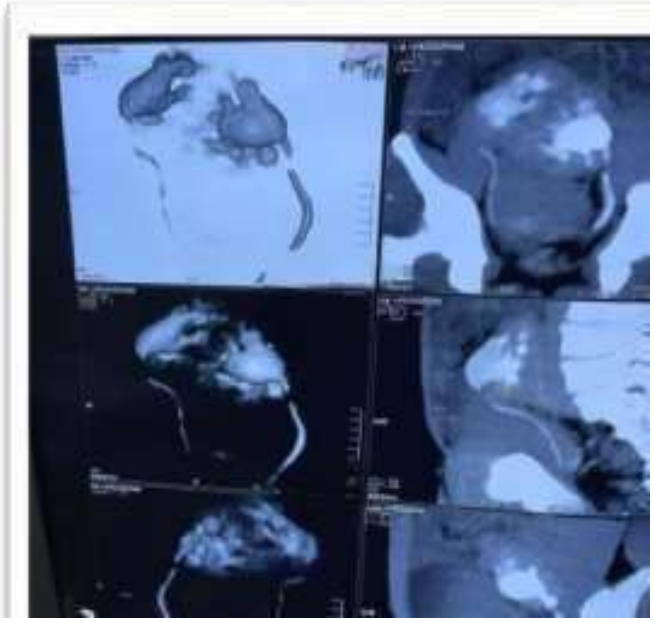
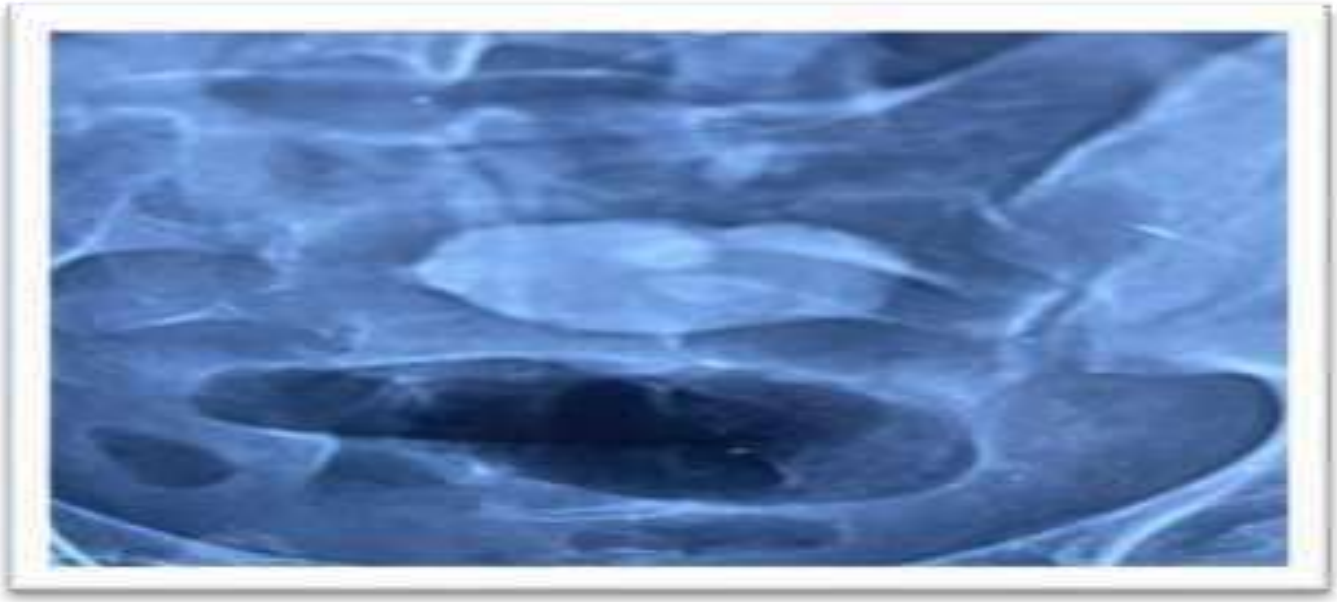


Figure 3: A CT Uro-gram with 3D reconstruction findings is consistent with doughnut kidneys

Figure 4: A Large Staghorn Stone That Has Been Retrieved



DISCUSSION

Notorious for its uncommon convolution in the anatomy and accompanying complications, the pancake kidney is a fully fledged congenital anomaly that presents patients with unique challenges both during diagnosis and composting costs.,.,., in clinical practice. Moreover, for example, on by-side tables, sometimes from 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 stones 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 the big renal stone within pisiform kidneys and the difficulties posed.

CONCLUSION

Managing a big staghorn stone is exceedingly important. By Size (8). This approach made careful stone extractions while helping to minimize damage to neighboring tissue, especially cul. Periaberrant vessels that are inappropriate are commonly associated with malformations involving the combination of kidneys. Another successful open pyelolithotomy we conducted shows how excellent the method is for such combined cases. Indeed, in this one, bipolar electrocautery was used instead of a laser. Furthermore, a postoperative follow-up of this patient proves that timely therapy can restore normal renal function. Indeed, half a year later, he was no longer symptomatic for stone disease. This underscores the importance of intervention again since complications resulting from an untreated kidney stone that is 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, unusual illness. While various 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 more sensible 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.

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Authors Contribution

Concept & Design of Study: Abdul Haseeb

Drafting: Abdul Haseeb

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we should track down the optimal diagnostic and therapeutic strategies and further elucidate examples, etc, of the rare hood of renal fusion disorders in these patients. Arduous endeavor and pancake kidney, commonly called doughnut kidney, is an extraordinarily

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