ISSN: 2230-9926

Available online at http://www.journalijdr.com

IJDR

International Journal of Development Research
Vol. 10, Issue, 03, pp. 34753-34755, March, 2020

RESEARCH ARTICLE OPEN ACCESS

BALLAD OF A BALLOTABLE MASS: GIANT HYDRONEPHROSIS

[1]Dr. Romy C.B., *[1]Dr. Raj Kumar, [1]Dr. Darshan Rathi and [2]Dr. Ashiq Raval

[1]Dr. B. A. M. Hospital, Central Railway, Byculla, Mumbai; [2]Prince Aly Khan Hospital, Byculla, Mumbai

ARTICLE INFO

Article History:
Received 19th December, 2019
Received in revised form
17th January, 2020
Accepted 03rd February, 2020
Published online 31st March, 2020

Key Words:

Giant Hydronephrosis, Ballotable.

***Corresponding author:* Dr. Raj Kumar,**

ABSTRACT

Aims and Objectives: An interesting case report of a large ballotable mass due to Giant Hydronephrosis. **Introduction:** Giant hydronephrosis has been defined as kidney that occupies a hemiabdomen, which meets or crosses the midline and which extends at least 5 vertebrae in length. Giant hydronephrosis (GH) is a rare entity, with less than 600 cases reported in the literature. **Materials and methods:** A 26 year old lady presented with complaints of left loin fullness for 1 year with no obstructive bowel or bladder complaints. On examination, the patient had a large ballotable mass in the left loin. CT scan revealed a large left kidney with gross hydronephrosis and paper thinning of cortical parenchyma. DTPA showed renal function of 9.1%. **Results**: The patient underwent Left Open Nephrectomy. The patient tolerated the procedure well and was discharged in stable condition. **Conclusion**: Nephrectomy is the procedure of choice in very poorly functioning kidneys however if kidney is salvageable then based upon the anatomical configuration, Reconstructive procedure should be selected. Delayed diagnosis and management of GH, can result in long-term complications like hypertension, rupture of the kidney, renal failure and malignant change.

Citation: Dr. Romy C.B., Dr. Raj Kumar, Dr. Darshan Rathi and Dr. Ashiq Raval. 2020. "Right localized pleural effusionandgiant splenic cyst withsplenic artery aneurysmsix months post trauma: aninteresting case report*", International Journal of Development Research*, 10, (03), 34749-34752.

INTRODUCTION

Hydronephrosis is defined as the aseptic dilatation of the pelvi-calyceal system due to partial or complete intermittent obstruction of urine outflow distal to the renal pelvis.Giant hydronephrosis (GH) has been variedly defined in the literature asthe presence of more than 1000 mLfluid or 1.6% of body weight of fluid in the renal collecting system or the kidney size extending up to five vertebral heights.Giant Hydronephrosis (GH) is a very rare clinical entity with only 600 cases reported in literature (Chiang, 1990). Thepossible etiologies of GH are congenital ureteropelvic junction obstruction in neonates and childrenor urolithiasis and strictures in adults. GH is usually seen in children and neonates and is usually congenital. However, it is a rare clinical scenario in adults and is often misdiagnosed clinically (Yang, 1995). We present a case of asymptomatic Giant Hydronephrosisin an adult patient treated in our hospital.

Case Report: A 26 year old lady, presented to our hospital with complaints of a left abdominal lump for last one year. It gradually and painlessly progressed to attain current size of 25×15 cm. She did not have any obstructive bowel or bladder complaints. She had no known comorbidities. On examination, the patient had a large 25×15 cm abdominal mass in the left loin which was crossing the midline. The mass had smooth surface, was firm in consistency and was ballotable (Figure 1). All the routine blood investigations and Urine tests were normal. Ultrasound confirmed a diagnosis of Giant Hydronephrosis of the left kidney.CT scan revealed gross hydronephrosis of left kidney and paper thinning of cortical parenchyma (Figure 2).

DTPA Scan showed a left renal function of 9.1% and a Right kidney was normal with a differential function of 90.9%. The patient was prepared for surgery and Open Left Nephrectomy was done on 15.11.19.The operative findings were a giant hydronephrotic kidney with narrowing at the pelvi-ureteric junction (Figure 3a & b). Patient tolerated the procedure well and was discharged in stable condition.Histopathological report revealed a large hydronephrotic kidney with compressed renal parenchyma with multiple cysts and features of obstructive uropathy.

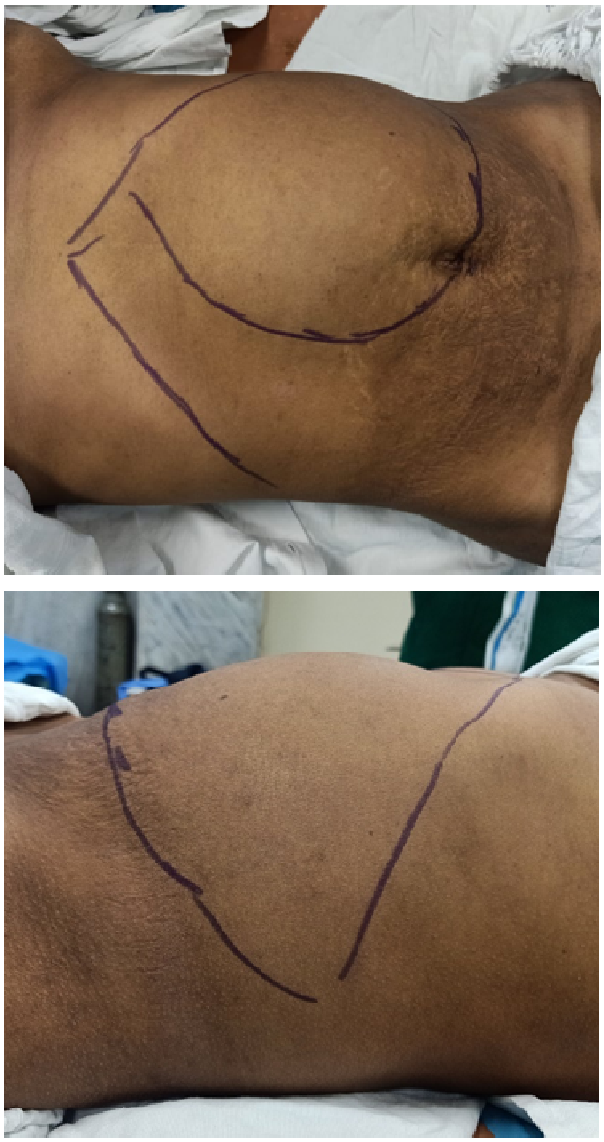

Figure 1. Images showing the abdominal lump in Lateral and Anterior views

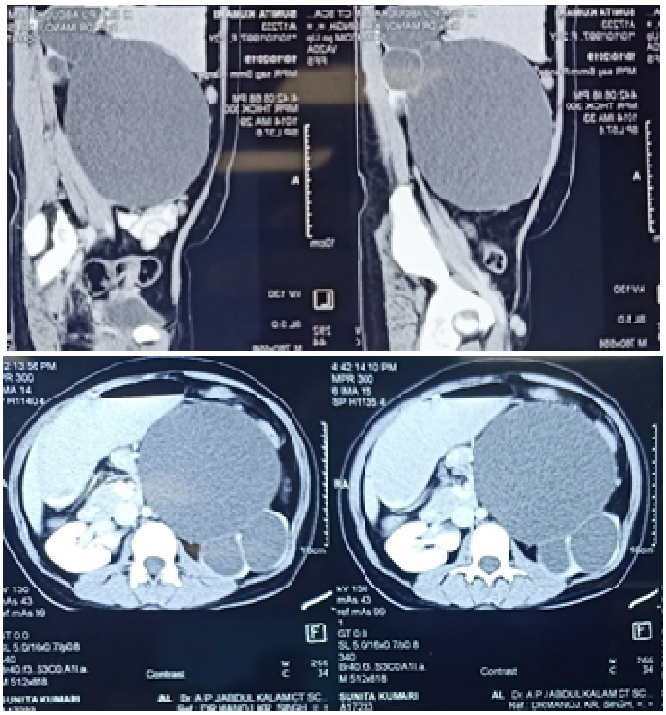

Figure 2. CT Images showing the abdominal lump

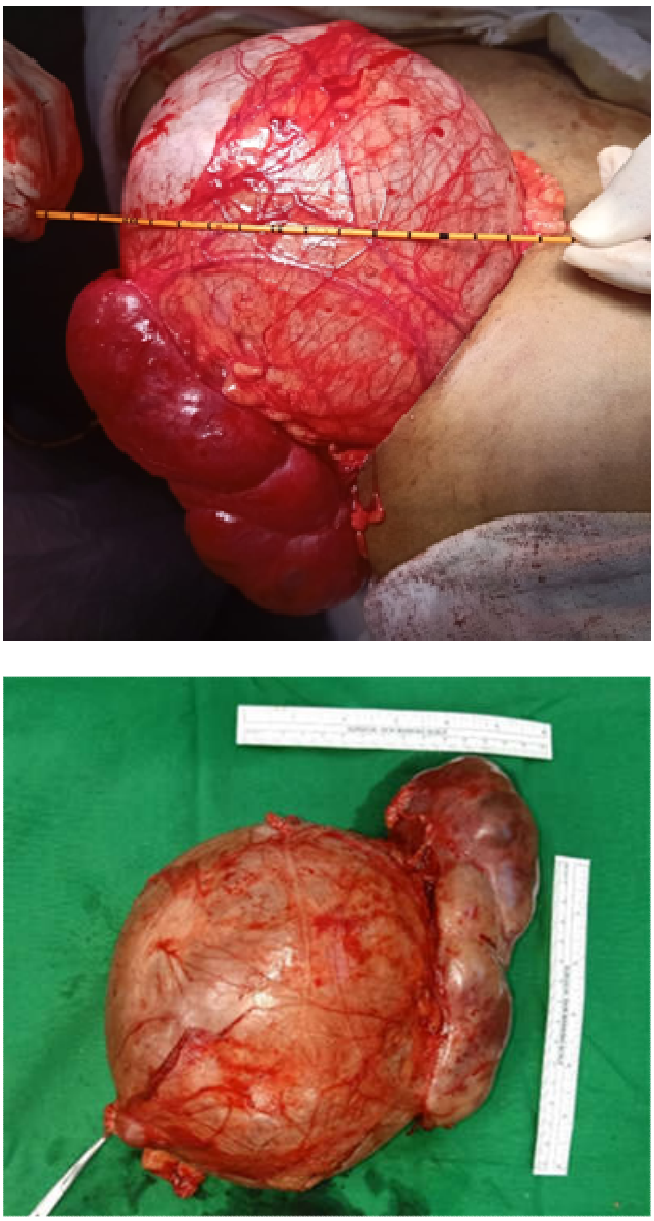

Figure 3: a) operative image showing large b) resected specimen image abdominal lump popping out of the incision

DISCUSSION

Gross Hydronephrosis was first defined by Stirling in 1939 as the presence of more than 1000 mLfluid or 1.6% of body weight of fluid in the renal collecting system (Chiang, 1990). Crooks et al.later gave the radiographic criteria for diagnosing GHas the kidney occupying the hemi-abdomen which also meets or crosses the midline, or has a height of about five to six vertebral bodies (Crooks, 1974). Giant Hydronephrosis is considered to develop gradually over a long period of time. Literature describes congenital ureteropelvic obstruction (33%) as the most common cause of Giant Hydronephrosis. Other causes are Urolithiasis (20%), congenital ureteral narrowing, uretero-pelvic tumours, trauma, renal ectopy retroperitoneal fibrosis, obstructivemegaureter, ureteric atresia and obstructive ectopicureter with or without a duplex system (Chiang, 1990; Yang, 1995; Crooks, 1979 Schrader, 2003). The clinical symptoms of GH are non-specific and patients often present with vague symptoms such asabdominal pain or an increased abdominal girth due to the presence of a mass in

the flank as happened in this case. Patients may also present with recurrent urinary tract infection, renal insufficiency, gross hematuria due to trauma in the area, the compressive symptoms of surrounding structures or even rupture of the kidney.[1] In patients with suspected GH, various differentials that should be consideredare hepatobiliary cysts, mesenteric cysts, pseudomyxoma, cystic renal tumors, retroperitoneal tumors, ovarian cyst, retroperitoneal haematomas, ascites and splenomegaly (Yapano, 2007). Advancement in imaging techniques has led to better imaging and identification of GH pathology.Imaging tools for GH serves two purposes namely anatomical description and functional evaluation. Ultrasound in such patients is a quick, non-invasive and sensitive method for confirming the diagnosis in order to undertake prompt and appropriate management.Computed Tomography (CT)helps in anatomical description of the kidneys, for the evaluation of stone and other pathology, and is the 'Gold Standard' investigation (Crooks, 1979; Kaura, 2017 and Aihole, 2018). Renal isotope scanning is themost accurate tool for evaluation of total and split renal functions and helps in deciding the further management of GH (Mujoomdar, 2012). The treatment of GH depends on the overall general condition of the patient and the functional status of the kidney and therefore treatment should be individualized in every patient. A percutaneous nephrostomy may be considered in patientswhosecondition does not allow other treatments or when hemodynamic changes can occur following a suddenabdominal decompression.[4,9]If the patient is febrile, has high serum creatinine level, if IVU shows non-visualized unit or if pelvicalyceal system is not well delineated an image guided drainage procedure may be considered (Bhandari, 2009).

Based upon overall functional status Nephrectomy or a Reconstructive surgery may be planned. Nephrectomy is often the only option in non-functional Giant hydronephrotic kidneys as there is no prospect of improvement in renal functionand there is a risk of trauma and tumour formation in these kidneys due to chronic irritation (Shudo, 1999). Pyeloplasty is performed in salvageable cases of GH due to PUJO. Calyco-ureterostomy, calico-cystostomy, and Boari flap calico-vesicostomy may be indicated in selected Salvageable kidneyswith massive calyceal dilatation and severely compromised peristalsis in the collecting system (Yang, 1995 and Wu, 2009). Laparoscopic approach has been studied in cases of GH with patients undergoing nephrectomy and pyeloplasty (Hemal, 1999; Harper, 2007 and Challacombe, 2001). Careful follow-up, however, is mandatory to detect any stone recurrence, infection, urinary obstruction or malignancy. GH in adults is an uncommon clinical entity that is often clinically misdiagnosed.The treatment of GH should be individualized depending upon the general condition of the patient and functional status of the kidney.

REFERENCES

Aihole JS, Babu MN, Jadhav V, Kasaravalli VK. Neonatal giant hydronephrosis – a rare case report. *Afr J Urol.* 2018; 24(2): 126–9.

Bhandari RS, Shrestha M, Shrestha GK, Mishra PR, Singh KP. Abdominal lump: a diagnostic dilemma. *JNMA J Nepal Med Assoc.* 2009; 48(173):75-7.

Challacombe B, Sahai A, Murphy D, Dasgupta P. Laparoscopic retroperitoneal nephrectomy for giant hydronephrosis: when simple nephrectomy isn't simple. *J Endourol.* 2007; 21(4):437-40.

Chiang PH, Chen MT, Chou YH, Chiang CP, Huang CH, Chien CH. Giant hydronephrosis: report of 4 cases with review of the literature. *J Formos Med Assoc.* 1990;89(9):811-7

Crooks KK, Hendren WH, Pfister RC. Giant hydronephrosis in children. J Pediatr Surg 1979;14:844-50.

Golcuk Y, Ozsarac M, Eseroglu E and Yuksel MB: Giant hydronephrosis. West J Emerg Med 15: 356, 2014.

Harper JD, Shah SK, Baldwin DD, Moorhead JD. Laparoscopic nephrectomy for pediatric giant hydronephrosis. *Urology*. 2007;70(1):153-6.

Hemal AK, Wadhwa SN, Kumar M, Gupta NP. Transperitoneal and retroperitoneal laparoscopic nephrectomy for giant hydronephrosis. *J Urol.* 1999;162(1):35-9.

Kaura KS, Kumar M, Sokhal AK, Gupta AK, Purkait B, Saini D, et al. Giant hydronephrosis: still a reality! Turk J Urol. 2017 Sep; 43(3):337–44.

Mujoomdar M, Russell E, Dionne F, et al. Optimizing health system use of medical isotopes and other imaging modalities [Internet]. Ottawa (ON): Canadian Agency for Drugs and Technologies in Health; 2012. Appendix 2.17, Suspected obstructive uropathy. Available from: https://www.ncbi.nlm.nih. gov/books/NBK174850/.

R. Shudo, T. Saito, K. Takahashi et al., "Giant hydronephrosis due to a ureteral stone, and elevated serum levels of CA 19-9," *Internal Medicine*, vol. 38, no. 11, pp. 887–891, 1999.

Schrader AJ, Anderer G, von Knobloch R, Heidenreich A and Hofmann R: Giant hydronephrosis mimicking progressive malignancy. BMC Urol 3: 4, 2003

Wu CC and Sun GH: Giant hydronephrosis. Mayo Clin Proc 84: 954, 2009.

Yang WT, Metreweli C. Giant hydronephrosis in adults: the great mimic. Early diagnosis with ultrasound. *Postgrad Med J*. 1995;71(837):409-12.

Yapano lu T, Alper F, Özbey, Aksoy Y, Demirel A. Giant hydronephrosis mimicking an intraabdominal mass. Turk *J Med Sci* 2007; 37:177-9.

****