



# A Surprise Laparotomy – Pyonephrosis

<sup>1</sup>Asayas Bosco Chandra Kumar\*, <sup>2</sup>Alagu Ganesh, <sup>3</sup>Sasivanan, <sup>4</sup>G.P.Sekar, <sup>5</sup>V.Radhakrishnan, <sup>6</sup>T.Ramachandrudu, <sup>7</sup>Balagurunathan

## ABSTRACT

The most thrilling surgery for a surgeon is a Laparotomy and it adds excitement if the case has a diagnostic challenge pre-op. And you find an unexpected finding, such is this case which was opened for a<sup>2</sup> Huge mesenteric cyst with absent left kidney/? Left renal cyst but surprisingly a pyonephrotic kidney was found in spite of the commonly available modern technologies to get a pre-operative diagnosis.

**KEY WORDS :** Pyonephrosis, Infected Hydronephrosis, Infected Purulent Urine, Obstructed Collecting System.

## Introduction

Pyonephrosis refers to infected purulent urine in an obstructed collecting system. Similar to an abscess, pyonephrosis is typically associated with fever, chills, and flank pain, although some patients with pyonephrosis may be asymptomatic [1]. Pyonephrosis is uncommon in adults, rare in children, and thought to be extremely rare in neonates. However, pyonephrosis has recently been reported in several neonates [2] and adults, making clear that pyonephrosis may develop in any age group. This case report is one of the rare findings on Laparotomy for peritonitis. Hence we would like to report.

<sup>1</sup>Associate Professor, Department of General Surgery, Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry.  
<sup>2,3,4</sup> Department Of General Surgery & Minimally Invasive Surgery, Sri Venkateshwara Medical College and Research Centre, Ariyur, Pondicherry-605021 India.  
<sup>5</sup>Assistant Professor,<sup>6,7</sup>Professor, Dept. of General Surgery, Sri Lakshmi Narayana Institute of Medical Sciences

### \*Corresponding Author

Dr. Asayas Bosco Chandra Kumar,  
Associate professor of General Surgery,  
Sri Lakshmi Narayana Institute of Medical Sciences,  
Osudu, Pondicherry-605502  
E.Mail id: drasayas.surgeon@gmail.com  
Telephonr number: +91-9159819500

## Case History

A 45 year old female presented to the casualty with complains of pain abdomen, distension and mass abdomen for the past fifteen days, Increased since two days. History of fever fifteen days ago. No history of diahorrea or malena. No trauma. No history of previous surgery. Menstrual history menarche at 13 yrs, 3-5/30, regular menopausal 11/2 yrs. Examination revealed average build and nutrition the patient high pulse rate and hypotension. Per abdomen distended abdomen, centrally located mass occupying the whole of left of abdomen. Palpation rebound tenderness all over the abdomen. The renal angle appeared free. And absent bowel sounds. Per vaginal and per rectal findings were normal except for anterior forniceal tenderness. Investigation: AXR- showed air loops on the right of the x-ray and homogenous shadow on the left of the abdomen, USG-cystic lesion occupying almost whole of abdomen extending into the pelvis, the left kidney was not visualised. Impression: ? Left tubo-ovarian mass with congenital absence of left kidney/? Huge left renal cyst. Hence we went in for CT

Abdomen and Pelvis. CT-scan- ? Mesenteric cyst, ?Tubo- ovarian mass. Left kidney not visualised. We planned for exploratory Laparotomy after resuscitation as patient was toxic, we were worried about the left kidney not being visualised, so planned for an IVP. IVP showed non visualisation of the left kidney, no trace of contrast in left side. Our provisional diagnosis was 1. ? Huge mesenteric cyst with absent left kidney. 2.? Left renal cyst Patient resuscitated with IV fluids and was taken up for emergency Laparotomy. Midline Laparotomy revealed a huge cyst (Fig.No.1) behind the mesocolon occupying the entire abdomen with adhesions to the mesocolon. We had a diagnostic dilemma between a huge cyst of the mesocolon and a retroperitoneal cyst. Mobilisation tried from left paracolic gutter but not to any use. So decided to aspirate the contents and proceed. To our surprise the aspirate was off white colour (Fig.No.2) the opening was enlarged and suctioned about three liters of fluid. At the end of the suction there was some necrotic mass probably the native kidney parenchyma which was totally thinned out. The reduced size helped us to mobilise and remove the cystic mass below the leaflets of the mesocolon. The cyst later started to come out easily and we also found the ureter distally with was ligated, and the bag of pus removed (Fig.No.3) and sent for histopathology, Reported as consistent with pyonephrosis. Post op period was uneventful. Her renal parameters were normal.

### Discussion and Conclusion

The diagnostic challenge made this case very unique. In spite of such a huge pyonephrotic left kidney, the patient was afebrile, did not have raised total count and also had no renal angle fullness or tenderness classical symptoms and signs [3]. The sensitivity of renal ultrasonography for differentiating hydronephrosis from pyonephrosis is 90%, and the specificity is 97% [4]. Computed tomography (CT) scanning is extremely helpful in diagnosing pyonephrosis. Advan-

tages of CT scanning include definitive delineation of the obstruction, function of the kidney, and severity of hydronephrosis, as well as the presence of other abdominal pathologies, including metastatic cancer, retroperitoneal fibrosis, and renal stones that are not visible on the sonogram [5,6] and IVP could not give a definite diagnosis. So one must not be surprised to find a pyonephrotic kidney on Laparotomy. Anything is possible in the Pandora's Box!

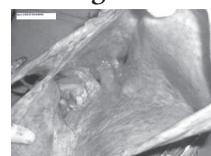
Fig No.1



Fig No.2



Fig No.3



Acknowledgements: Mrs. A. Benitha Dev Sheela – For Moral and Computing Support

### References

1. St Lezin M, Hofmann R and Stoller ML. 1992. Pyonephrosis: diagnosis and treatment. *British Journal of Urology*. 70: 360-363.
2. Sharma S, Mohta A and Sharma P . 2004. Neonatal pyonephrosis a case report. *International Urology and Nephrology*. 36: 313-315.
3. Roberts JA . 1986. Pyelonephritis, cortical abscess, and perinephric abscess. *Urologic Clinics of North America*. 13: 637-645
4. Subramanyam BR, Raghavendra BN, Bosniak MA, Lefleur RS, Rosen RJ and Horii SC. 1983. Sonography of pyonephrosis: a prospective study. *American Journal of Roentgenology*. 140: 991-993.
5. Jeffrey RB, Laing FC, Wing VW and Hoddick W. 1985. Sensitivity of's sonography in pyonephrosis: a reevaluation. *American Journal of Roentgenology* 14: 71-73.
6. Wyatt SH, Urban BA and Fishman EK . 1995. Spiral CT of the kidneys: role in characterization of renal disease. Part I: Nonneoplastic disease. *Critical Reviews in Diagnostic Imaging* .36: 1-37.