Int J Pharm Bio Sci 2014 Jan; 5(1): (B) 531 - 534

**Research Article** **Pathology**

**International Journal of Pharma and Bio Sciences** **ISSN 0975-6299**

# LAPAROSCOPIC FENESTRATION OF POLYCYSTIC LIVER DISEASE - A CASE REPORT

**DR.K.V.RAJAN*[1] AND DR. HARSH CHUGH[2]**

*[1]Associate Professor*
*[2]Post Graduate*
*Department Of General Surgery, Mahatma Gandhi Medical College and Research Institute, Pondicherry*

## ABSTRACT

Polycystic liver disease is an uncommon cystic liver disease that is transmitted through autosomal dominant inheritance. We present the case of a 65 years old female patient with massive polycystic liver disease, diagnosed by ultrasound examination and abdominal computed tomography scan. The clinical course of this disease is often complicated by compressive symptoms due to the large size of the cysts. Our patient presented with upper abdominal pain, nausea, vomiting, early satiety and discomfort during meals for 3 months. Cyst fenestration through laparoscopic approach resolved the symptoms. The patient was mobilized on the day of the surgery, and was discharged on the 3rd postoperative day, after drain tube removal. The laparoscopic approach is an established standard of care for treatment of simple hepatic cysts. The patients greatly benefit from the advantages of minimally invasive surgery.

**KEY WORDS:** **Polycystic liver disease, Laparoscopic fenestration, liver cyst**

**DR.K.V.RAJAN**
**Associate Professor Department Of General Surgery,**
**Mahatma Gandhi Medical College and Research Institute, Pondicherry**

***Corresponding author**

# INTRODUCTION

Adult polycystic liver disease (APLD) is a rare congenital cystic liver disease with autosomal dominant transmission with a prevalence of 0.08% to 0.53% and is frequently associated with autosomal polycystic kidney disease. APLD is usually asymptomatic and does not require any surgical treatment. However, patients who present with symptomatic cystic hepatomegaly benefit from surgical decompression of the cystic lesions[1]. Currently, the most appropriate therapeutic approach for APLD remains controversial[2.] Transient improvement with non-surgical treatment such as aspiration or ablation with alcohol and various surgical methods has been advocated. This case report highlights the benefits of laparoscopic fenestration of the cystic lesion resulting in early recovery, less morbidity and better cosmesis for the patient .It also provides a long term symptom free life.

## *CASE REPORT*

A 65 years-old woman, an house wife, presented to our surgical OPD with complaints of upper abdominal pain, vomiting, early satiety and discomfort during meals for three months. Examination revealed a large, soft and non-tender mass in epigastrium. Ultrasound (USG) examination showed multiple cystic lesions in liver. CT abdomen done, which revealed multiple hepatic cysts, the largest one measuring 12x10 cm, arising from the left lobe and impinging on the pylorus (Figure 1). Surgical intervention was done as the largest hepatic cyst was causing pain and compressing the stomach leading to discomfort and early satiety. A 3 port technique was employed for carrying out the fenestration of this cyst(Figure 2) .The procedure involved laparoscopic aspiration(Figure 3) of the cyst fluid, removing nearly 1 litre of serous fluid and deroofing (excision)of the cyst wall with diathermy scissors. This allowed the secretions from the cyst to be directly drained into the peritoneal cavity. A tube drain was placed in the residual cyst cavity and it was removed on third post operative day .Patient made a rapid, uneventful recovery and discharged. Histopathological report of the excised cyst wall confirmed features of simple hepatic cyst (Figure 4). Patient was monitored at regular intervals and remained asymptomatic at 1 year follow up. She has been put on USG surveillance programme to assess progression of remaining cysts.

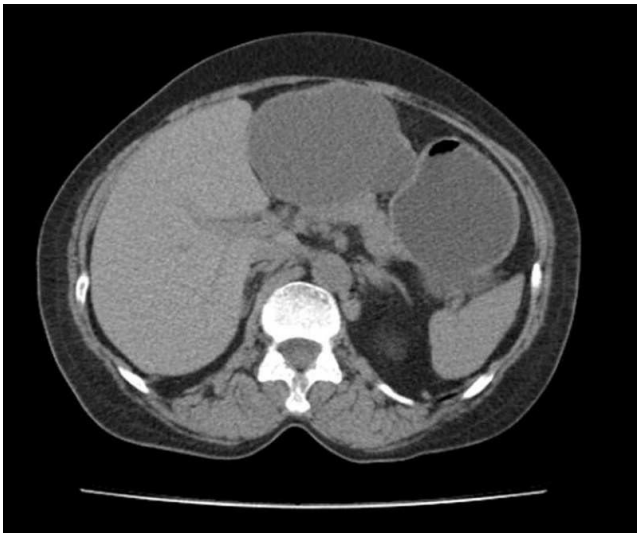

**Figure -1**
***Axial cut showing large cyst arising from the left lobe.***

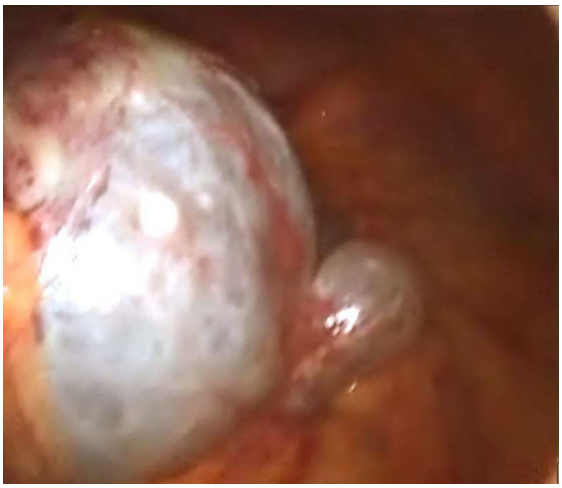

**Figure -2**
***Intra operative view of the large hepatic cyst.***

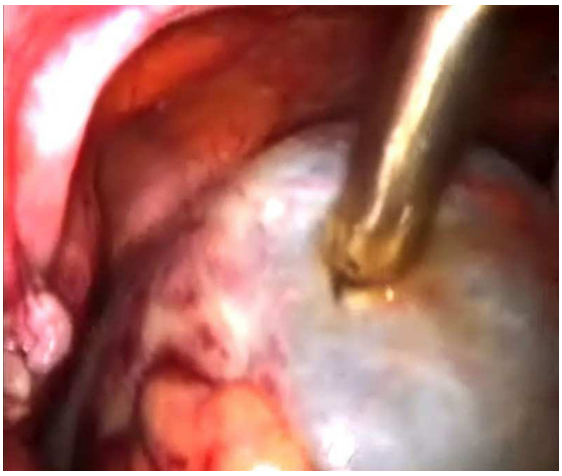

**Figure -3**
***Cyst fluid being aspirated using a 10 mm trocar port.***

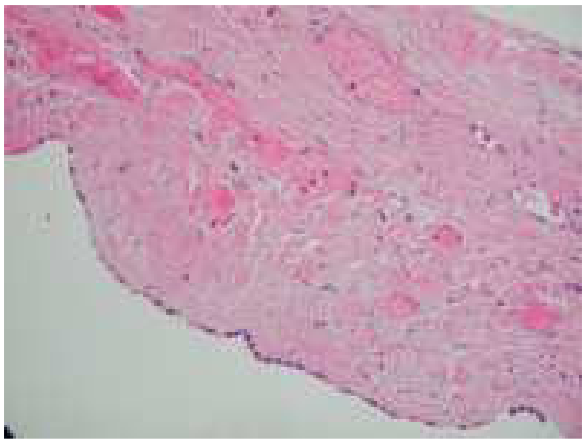

**Figure -4**
***histopathology of the simple liver cyst.***

## DISCUSSION

Polycystic liver disease (PCLD) is rare and occurs with 19p13; 6q21 translocation in an autosomal dominant (AD) pattern, either in isolation or associated with polycystic kidney disease (PCKD) [3.] A study by Shoba et al has shown a potential therapeutic role for flavonoids in the treatment of PCKD [4]. A distinctive form of AD PCLD has been recognized recently without concomitant PCKD. A possible mechanism is hyperplasia of bile ducts after embryogenesis resulting in cystic hepatic dilatations, also termed as biliary microhamartomas or von Meyenburg complexes[5]. Isolated PCLD has been associated with the genes *SEC63* and *PRKCSH.* The protein products of *SEC63* and *PRKCSH* (sec-63 and hepatocystin respectively), are involved in protein processing, and mutations in these genes affect proteins such as polycystin-1 and polycystin-2, which are associated with the transport of fluid and the growth of epithelial cells causing cystic lesions[2]. Majority of these are asymptomatic and only 10-15% become symptomatic when the volume of cysts increases. A recent study has shown that laparoscopic fenestration brings about a 12.5% reduction in the volume and a consequent alleviation of symptoms[6]. Mild pain associated with PCLD can be treated with analgesics. However, if the cysts cause significant discomfort or other complications like rupture and infection, there are a number of treatment options:

- Cyst aspiration with ablation or sclerotherapy[1]
- Cyst fenestration [6,7]
- Liver resection
- Liver transplantation[8]

## CONCLUSION

Laparoscopic approach for the management of symptomatic cysts has become the standard of care as it provides rapid recovery, minimal post-operative pain and better cosmesis

## REFERENCES


1. Bara T, Bancu S, Mureşan M, Mureşan S, Bancu L, Denes L, Bara T Jr., Polycystic liver disease with complications: fenestration by laparoscopic approach, Chirurgia (Bucur), 107(6):791-795, (2012).
2. Gregory T, Everson, Polycystic Liver Disease, Gastroenterol Hepatol, 4(3): 179–181, (2008).
3. Hoevenaren IA, Wester R, Schrier RW, McFann K, Doctor RB, Drenth JP, Everson GT Polycystic liver: clinical characteristics of patients with isolated polycystic liver disease compared with patients with polycystic liver and autosomal dominant polycystic kidney disease, Liver Int, 28(2):264-70, (2008).
4. Shoba G, Shyamala Hari, Prabhavathi G , Sugeetha Stella, Flavonoids - Natural Therapeutic Agents For Polycystic Kidney Disease, IJPBS, Vol.1/Issue-4: B89-104, (2010).
5. 5.Russell RT, Pinson CW, Surgical management of polycystic liver disease, World J Gastroenterol, 13(38):5052-9, (2007).
6. 6 van Keimpema L, Ruurda JP, Ernst MF, van Geffen HJ, Drenth JP, Laparoscopic fenestration of liver cysts in polycystic liver disease, J Gastrointest Surg, 12(3):477-82, (2008).
7. Kabbej M, Sauvanet A, Chauveau D, Farges O, Belghiti J, Laparoscopic fenestration in polycystic liver disease, Br J Surg, 83(12):1697-70, (1996).
8. Choi CJ, Kim YH, Roh YH, Jung GJ, Seo JW, Baek YH, Lee SW, Roh MH, Han SY, Jeong JS, Management of giant hepatic cysts in the laparoscopic era, J Korean Surg Soc, 85(3):116-22, (2013).