

Laparoscopy for Undiagnosed Ascites

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Abstract

A prospective study of 18 patients with undiagnosed ascites ,the usual methods for searching the causes of ascites were failed laparoscopy done for these patients, the procedure and results discussed with special concentration on the value of laparoscopy in medical problems. Laparoscopy is safe and accurate in diagnosing the cause of ascites when etiology of ascites not diagnosed by conventional methods.

Introduction

Ascites refers to accumulation of free fluids in the peritoneal cavity. Cirrhosis is one of the most common causes of ascites.The other causes of ascites include:malignant diseases, tuberculosis ,hypoproteinemia, infections, pancreatitis ,etc. Peritoneal tuberculosis and carcinomatosis are the main causes of lymphocytic exsudative ascites, which requires rapid diagnosis to institute appropriate therapeutic management. The etiological diagnosis is a particularly difficult task due to the lack of specific clinical, radiographic, or biological signs and the fact that none of the proposed complementary tests have sufficient positive predictive value (PPV) for definitive diagnosis. Consequently, a histological sample from a peritoneal or liver biopsy, ideally obtained laparoscopically, is required to establish the final etiologic diagnosis (Xiao, & Liu, 2003 and Nebhani et al, 2009).

Diagnostic laparoscopy is valuable in evaluating the liver disease and metastasis that may not be detected by the conventional imaging techniques and CT, MRI,scintigraphy and hepatic angiography, although laparoscopy can be valuable in detecting peritoneal diseases (Thoreau, et al., 2002 and.Sanai & Bzeizi, 2005).

Patients and Methods

The study included 18 patients with ascites the underling was undetected by conventional imaging methods and laboratory investigations including ascitic fluid examination.of those 14 males and 4 females, the mean age of these patients was 59 years old.according to fig.1

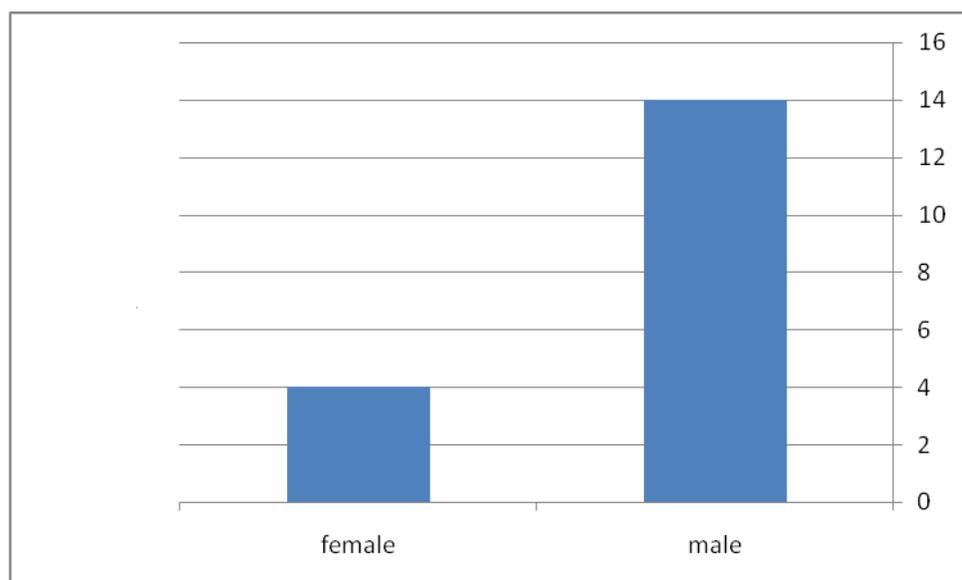


Fig.1: gender distribution of causes of ascitis

Procedure

Laparoscopy in the ascitic patient demands special precautions ,the patient should not have the fluid tapped prior to operation because this will lead to a post operative leak (Kirk and Ribbans, 2005).

Pnemoperitoneum must still be performed because the gas filled viscera will float to the top of ascitic pool.

The veress needle must be carefully positioned, usually in the iliac fossa, as a caput medosae will make it more likely for vascular injury if the needle introduced around the umbilicus in patients with portal hypertention .The needle should be positioned horizontally once in side the peritoneal cavity because infusion into the fluid will cause frothing to occur. Pneumoperitoneum gas should be introduced in step wise and should be interpresed with suction of fluid once the trocar has been introduced (Kirk and Ribbans, 2005).

One must be ensure that closure is in layers to prevent danger of an ascitic leak these patients usually have disturbed coagulation profiles therefore special attention must be given to this aspect.

Results

From a total of 18 patients, 12 were going with liver cirrhosis is also proved by histopathological examination.

2 patients diagnosis as abdominal carcinomatosis.

3 patients with multiple peritoneal and visceral nodules proved to be TB. and 1 patient diagnosed as fibromatosis. There was no mortality nor morbidity from the procedure.acording to table1.

Table 1: causes of ascitis according to final diagnosis

Causes	No.
Liver cirrhosis	12
Abdominal carcinomatosis	2
TB	3
fibromatosis	1
total	18

Discussion

Tuberculosis and carcinomatosis are the leading etiologies of exudative ascites. Peritoneal TB raises significant diagnostic difficulties due to the poor predictive value of complementary tests and the low rate of positive bacteriological samples, with about 3% of positive results on direct examinations and a delay of more than two months for culture results which are positive in less than 35% of cases (Sanai & Bzeizki, 2005). The physical examination is poorly contributive and imaging, particularly the CT scan, cannot visualize partitioned ascites with fascial thickening, leading to the risk of misdiagnosis of tuberculosis (Simsek, *et al.*, 1997).

This difficult diagnostic situation contrasts with the requisite for certain etiologic diagnosis in patients with exudative ascites since adequate treatment for TB, which is often long, costly, and source of adverse effects, must be instituted as early as possible. The peritoneal biopsies, ideally obtained laparoscopically, are the only way to achieve certain diagnosis and as such constitute the gold standard for etiological diagnosis of exudative ascites, better with laparoscopy can be explained, at least in part, by the better visual exposure and also by the quality of the biopsy material obtained with laparoscopy (Mimica, 1992; Shaki, *et al.*, 1996). Laproscopy is thus the method of choice with nearly zero mortality and very low morbidity, but is nevertheless a surgical operation with the real inherent risks of anesthesia and surgery (Bhargava, *et al.*, 1992; Chu, *et al.*, 1994 and Demir, *et al.*, 2001). Ascites is one of the major complications of liver cirrhosis and portal hypertension. Within 10 years of the diagnosis of cirrhosis, more than 50% of patients develop ascites (Gines, *et.*, 1987). Since 15% of patients with liver cirrhosis develop ascites of non-hepatic origin, the cause of new-onset ascites has to be evaluated in all patients (Arroyo, 1996). Paracentesis is considered a safe procedure even in patients with an abnormal prothrombin time, with an overall complication rate of not more than 1% (Runyon, 1986).

Conclusion

Laparoscopy is safe and accurate in diagnosing the cause of ascites when etiology of ascitis not diagnosed by conventional methods.

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الناظور الاستكشافي لاستسقاء البطن غير المشخص

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الخلاصة

أجريت الدراسة على ١٨ مريضاً يشكون من استسقاء البطن غير المشخص، باستخدام الطرق الاعتيادية لتشخيص أسباب الحالة.

تم إجراء فحص ناظور البطن الاستكشافي لجميع المرضى وتم كتابة النتائج والمناقشة مع تركيز الانتباه على أهمية فحص الناظور في الحالات الطبية.