



RUPTURED UMBILICAL HERNIA

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KEYWORDS : Umbilical Hernia , Ascites**CASE REPORT:**

A 70 year old non-alcoholic male patient presented in the emergency department with evisceration of omentum and leakage of straw colored fluid from umbilicus for 3 days . The patient had a history of umbilical swelling for 1 year. which was gradually increasing in size. He was on medical therapy for control of ascites. ascitic tapping was done 2.5 years back. He had no history of abdominal pain, nausea , vomiting , diarrhoea , constipation, difficulty breathing.

Physical examination revealed normal vital signs.he was alert and mentally well oriented.

temp. - 98.3 f , pulse - 86/min , blood pressure - 134/82 mmhg , respiratory rate- 17/min, spo2 - 99% on room air .

Abdominal examination :

On inspection - marked distended globular in shape , without dilated veins, pigmentation. ruptured umbilical hernia draining straw colored ascitic fluid and evisceration of omental fat of approximately 15*8 cm2 in size. surrounding skin blackening present around the ruptured part, no active bleeding .

On palpation - approximately 10*8*2 cm3 sized eviscerated omentum , near opening was soft , with distal part firm in consistency. temperature normal, tenderness absent, no guarding, no rigidity.

Patient was admitted for further workup

Blood Investigations:

Cbc : Hb 9.5 , Wbc 6700 , Platelets 54000

Rft : Urea 54 , Creat 1.66 , Na - 129 , K - 4.7

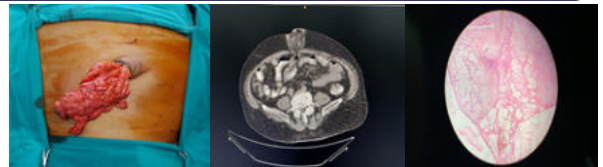
Lft : Total Billi - 2.0 , Direct Billi - 0.9 , Total Protein - 6.2 , Albumin 2.7

USG whole abdomen:

altered echotexture and irregular margins of liver, suggestive of changes of liver parenchymal disease. Approximately 28mm sized wall defect is noted at umbilicus with herniated omentum . mild ascites noted.

CECT Abdomen :

Approximately 30mm sized wall defect at umbilicus with evisceration of omental fat and mesentery incarceration. The right lobe of the liver appears shrunken with a hypertrophied left lobe with irregular margins suggestive of liver parenchymal disease. spleen measures 14cm in long axis suggestive of splenomegaly



Patient was given 4 platelet rich concentrates and 1 packed cell volume in a view of low platelets and low hemoglobin preoperatively. laparotomy was performed with midline incision , devitalised omentum excised and sent for hpe . abdominal decompression and drainage of ascitic fluid done . Omphalectomy and umbilical herniorrhaphy was done .

With regards to intravenous fluid management, a combination of crystalloids and human albumin solution were used for hydration and volume replacement due to the loss of ascitic fluid. higher antibiotics given for 5 days.

On post operative day 2 , patient was started on liquid diet patient was discharged on post operative day 3

HPE revealed acute on chronic inflammation of omentum.

Patient came for regular follow up till all SR done (day 14)

Patient was referred to the department of medicine for further management of liver parenchymal disease.

DISCUSSION :

The Incidence of hernias is increased in patients with alcoholic liver disease with ascites . the first reported case of spontaneous rupture of an umbilical hernia from ascites was reported by mixer in 1901.the precipitating factors for rupture described includes local trauma and a sudden increase in intra-abdominal pressure, such as coughing, vomiting or esophagoscopy. all of the above precipitants are known to cause acute variations in the intra-abdominal pressure. The combination of increased intraabdominal pressure and the inherently weakened abdominal wall at the linea alba in the umbilical region causes the formation of umbilical hernias in approximately 20% of patients with cirrhosis and ascites. paracentesis, typically therapeutic more often than diagnostic with the removal of large volumes of ascites, can increase the risk of developing hernias because of the drastic changes in pressure during the procedure.in the presence of chronic elevation of intra-abdominal pressure, such as occurs with ascites, these activities and patient positions cause an additional

increase in intra-abdominal pressure which can overwhelm the strength of the anterior abdominal wall layers. The presence of discoloration, ulceration or a rapid increase in size of the umbilical hernia signals impending rupture. Current thinking suggests that there is a dynamic adaptive change which takes place in all organisms in response to a chronically elevated intra-abdominal pressure, principally as adaptations to the constitutional properties of the abdominal cavity. This occurs in order to maintain normal functioning. These adaptations are mainly in the form of changes in muscular structures. There have been several animal studies showing that muscular components of the abdominal cavity, as well as the diaphragm, adapt when subjected to conditions of increasing intra-abdominal pressure. However, it is likely that in more acute or subacute changes of intra-abdominal pressure, such as sudden increase in ascites combined with straining, the other complications of ruptured umbilical hernia includes strangulation, infection, necrosis of the abdominal wall, renal failure and hepatic failure. Strangulation is very uncommon and can be precipitated by rapid reduction of ascites whether done intentionally or due to spontaneous rupture.

CONCLUSION:

The spontaneous rupture of an umbilical hernia in our patient with ascites highlights a rare complication with high mortality rates and stresses the challenge of treatment that falls in the area between medical and surgical management. On the other hand, surgical portosystemic shunts have proven effective to control refractory ascites, although they have been associated with high mortality rate (10%), high incidence of associated encephalopathy (50%) and negative impact on a potential subsequent liver transplantation. A consensus has been reached to follow conservative measures to prevent the occurrence of disease and tailor the surgical options based on the severity of the presentation. Elective umbilical hernia repair has shown favorable outcomes only in patients with intensive preoperative optimization. Urgent herniorrhaphy is necessary for cirrhotic patients with complicated hernias, i.e., obstructed or ruptured umbilical hernia. However, postoperative control of ascites is mandatory to prevent recurrence and further complications. Taking into consideration the limitations of our study, our experience shows that successful primary repair of ruptured umbilical hernias in these patients is feasible after meticulous optimization and satisfactory control of the ascites.

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