THE MULTI-DISCIPLINARY APPROACH TO CHOLEDOCHOLITHIASIS

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Eitezaz Ahmed Bashir, C.W Jamieson, D.P.H Thompson (Department of Gastroenterology/Surgery, St. Thomas Hospital SEI 7EH London, UK.)

The past decade has seen significant changes in the management of patients with cholelithiasis. An elderly patient with obstructive jaundice who was managed by endoscopic sphincterotomy, nasobiliary drainage and extracorporeal shock wave lithotripsy (ESWL) is presented. A 76 year old woman was admitted to St. Thomas Hospital on 15th March, 1990 with a six days history of colicky pain in the right upper quadrant of the abdomen. The pain was aggravated by taking food and needed Buprenorphine for relief. She also developed dark coloured urine, jaundice and pruritis over the last five days. She had a similar episode of right upper quadrant pam and mild jaundice 18 months back, Ultrasound scan of the abdomen at that time revealed gall stones. She also had barium studies which revealed sliding hiatus hernia. She was a known hypertensive but had no history suggestive of myocardial ischaemia. On examination she was apyrexial, dehydrated and jaundiced. Pulse was 104/mm and BP 150/80 mmHg. No lymphadenopathy was present. Abdominal examination revealed tenderness and guarding in the right hypochondrium but no ascites. Bowel sounds were present and rectal examination did not reveal any abnormality.

Investigations

Full blood count revealed normal haemoglobin, White cell count was 11.8/cmm. Blood chemistry and blood enzymes showed serum bilirubin of 266 mmol/l, alkaline phosphatase 1405 U/L, ALT 265 U/L. Coagulation studies were normal. Ultrasound scan of upper abdomen revealed dilated intrahepatic and common bile ducts with evidence of probable gall stones at the distal end of the common bile duct. The gall bladder was small and shrunken with a small calculus in it reported in an infant of similar birth weight. Despite this the ERCP revealed a normal pancreatogram and the common bile duct was dilated with a solitary 9 mm calculus demonstrated at the level of cystic duct. After performing sphincterotomy an attempt was made to extract the stone with a balloon catheter but as the catheter was being passed beyond the stone, the stone shifted into the cystic duct. However, it was thought likely that the stone would pass spontaneously through the sphincterotomy. Unluckily it did not and the patient had post sphincterotomy bleeding which needed four units of blood transfusion. However, it settled spontaneously. Serum bilirubin/alkaline phosphatase and ALT rose further. Serum amylase was 926. Repeat ERCP a week later revealed the stone in the mid common bile duct. Nasobiliary tube was passed and placed above the stone in the common bile duct for free drainage of bile and infusion of mono-octanoin 120 ml/24 hours. Nasobiliary drainage helped tremendously in lessening the jaundice which was confirmed by blood chemistry and enzyme studies. A week of mono-octanoin infusion was, however, without any results so it was decided to treat the stone with extracarporeal shock wave lithotnpsy (ESWL). The stone was fragmented successfully. Mono-octanoin infusion was continued for 24 hours and tubogram 48 hours later showed the presence of fragments of stone in the common bile duct. She was discharged a month later and when reviewed in out-patients 18 days later she was found asymptomatic. Jaundice settled clinically as well as biochemically. Ultrasound was normal with no stone in the common bile duct.

DISCUSSION

It is known that CBD stones will occur in 10-20% of patients undergoing cholecystectomy with

prevalence rising with age[1]. Published figures also suggest that fit patients undergoing surgery for CBD stones will have an operative mortality of less than 1% but for patients of 60 years with either jaundice, cholangitis, strictures, associated medical disease or undergoing re-operation the mortality rises to between 5-28%[2]. A study of 97 elderly patients being treated by endoscopic removal of CBD stones has shown the late mortality falling to 2% and a 1% incidence of retained stones[3]. Management options have been widened with the imaginative and highly skilled use of fiberoptic endoscopy to dissolve, crush and extract stones into the bile duct. To complete the picture we have emerging the added option of extracorporeal shock wave lithotripsy (ESWL) [4]. With regard to stone dissolution the use of oral bile acids has been disappointing. Contact dissolution is preferred and cholesterol solvents such as mono-octanoin or methyl-tert-butyl ether (MTBE) are currently used. The results are encouraging especiallywith MTBE[5]. Mechanical stone extraction involves using instruments introduced into the bile duct tract, percutaneously through the transhepatic route or endoscopically. Perhaps the most significant advance has been the advent of endoscopic sphincterotomy. Its role is now ill defined and is considered as the treatment of choice for the elderly, frail patient with associated medical illness[6]. Overall results suggest that ESWL may be achieved in 96% with stone removal in 85%. Mortality incidence of complications and incidence of retained stones compare favourably with surgery[6]. At the University Medical Centre, Grosshadern in Munich, extracorporeal shock wave lithotripsy (ESWL) was developed by Brundel and colleagues[7]. There has been much interest in ESWL for CBD stones. Herber et al[8] reported a review of 275 patients who had been managed between January, 1985 and December, 1987. Surgery was carried out in 75 patients with retained stones. Endoscopic sphincterotomy was carried out in 200 patients with success in 149. Of the 51 failures, ESWL was used with success in 41 (81%), 7 patients having retained fragments and 3 patients having to undergo surgery, the indications being acute cholecystitis (one), and impacted backet (one) and rupture of diverticulum (one). In conclusion the interd CBD stoens seems o be o yeas CBD stones have been managed by surgeons but now we should look carefully at the outcome of surgery andwhen appropriate, avail of the alternative modern technological advances. If applied apropriately, these can significantly raduce mortali morbidity.

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