



HEMOLYTIC ANAEMIA PRESENTING AS OBSTRUCTIVE JAUNDICE- A CASE REPORT

Surgery

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ABSTRACT

Black pigment stones are more common in Indian subcontinent. It occurs most commonly in haemolytic conditions with increased bilirubin production. The stones formed here are often multiple. They go to common bile duct as secondary stones which may obstruct common bile duct and present as obstructive jaundice. Here I am reporting a case of cholelithiasis with choledocholithiasis in a 32 year old female with beta thalassemia trait. The pathology here is hemolysis with increased bilirubin production which ultimately results in black pigment stone formation which is composed of calcium bilirubinate, calcium phosphate and calcium bicarbonate. Since there is no features of cholangitis, we proceeded with ERCP stone retrieval with placement of DJ stent insitu followed by laparoscopic cholecystectomy 6 weeks later and stent removal.

KEYWORDS

CASE PRESENTATION

32 yrs female Mrs.X, Who is a known case of Beta Thalassemia trait came with complaints of yellowish discolouration of the eyes for 1 month, she also had a history of abdominal pain for 1 month over right hypochondrium, colicky type, aggravated on fatty meals, relieved on fasting, referred to right shoulder. She also had history of passing high coloured urine, pale coloured stools and pruritis. There is no history of fever, loss of appetite, loss of weight and malena. She was diagnosed with beta thalassemia trait during her first pregnancy 8 years back. Her obstetric history is P2L2, 2 LSCS, Last child birth 2 years back, tubectomy done 2 years back. She had history of multiple blood transfusions for the last 8 years. On Examination she had Pallor and Icterus. Per Abdomen examination showed right hypochondrial tenderness with hepatosplenomegaly. A provisional diagnosis of Obstructive jaundice due to choledocholithiasis with cholelithiasis, which was due to hemolysis because of Beta Thalassemia trait. Her Hb was 7.0 gm/dl and TB/DB-4/3mg/dl. Other blood parameters like RFT, LFT, PT INR are within normal range. USG showed cholelithiasis (Multiple stones) with choledocholithiasis, a single stone in distal CBD of size 7*7mm with proximal CBD diameter of 8mm with no IHBRD. There is hepatosplenomegaly also. We proceeded with MRCP which showed multiple GB Calculi with largest 1*1cm with choledocholithiasis with stone in Distal CBD of size 7*7mm with Proximal CBD-8mm diameter with no IHBRD. There is hepatosplenomegaly with secondary haemochromatosis. After optimizing the haemoglobin, we did ERCP with endoscopic sphincterotomy and stone retrieval followed by DJ Stent kept insitu. After proper assessment we did Laparoscopic cholecystectomy 6 weeks later and stent removal. Patient was stable postoperatively and discharged on POD 3.

Figure1: A Case Of Beta Thalassemia Trait With Pallor



Figure 2: Icterus Seen In Upper Bulbar Conjunctiva



Figure 3: Per Abdomen Examination Showing Hepatosplenomegaly



Figure 4: Usg Showing Multiple Gallstones With Posterior Acoustic Shadowing With Gall Bladder Thickness 3mm .



Figure 4: Mrpc Showing Distal Cbd Calculi Of Size 7*7mm With Cbd Diameter 8mm



Figure 5: Post Operative Cholecystectomy Specimen Showing Black Pigment Stones.

DISCUSSION:

Cholelithiasis occurs due to various causes. The most important cause is the presence of the supersaturated bile with cholesterol. Normally cholesterol is in insoluble form, Its solubility depends on the presence of bile salts and lecithin which forms micelles around the cholesterol which makes it soluble. Normal ratio of bile salts and lecithin to cholesterol should be 25:1. Ratio below 13:1 leads to supersaturation of cholesterol in bile which results in crystallisation and formation of cholesterol monohydrate crystal formation. This is called nucleation. Eventually precipitation and stone formation occurs. Here cholesterol stones are common. This is a most important metabolic cause of stone formation in western countries. In Asian countries the most important cause of stone formation is increased bilirubin production which occurs due to Haemolysis which occur in Hereditary spherocytosis, Sickle cell anaemia, Thalassemia, Malaria and Cirrhosis. Here black

pigment stones are common. The composition of black pigment stones are calcium bilirubinate, calcium phosphate, and calcium bicarbonate. The clinical features are asymptomatic, biliary colic, Acute cholecystitis, chronic cholecystitis to Empyema, perforation of the gallbladder. Here we see a case of cholelithiasis due to Increased bilirubin production due to hemolysis in a Beta Thalassemia trait patient. Here black pigment stones formed which are multiple and secondary CBD stones are common, which may present as obstructive jaundice. Investigations include USG abdomen in which gall stones are seen as posterior acoustic shadowing, CBD diameter can also be seen which can be >8mm in biliary obstruction. CT scan is the sensitive investigation for CBD stones. MRCP is a noninvasive investigation which delineates biliary tree anatomy and pathology clearly but it is not therapeutic. ERCP identifies pathology, site of block, stones with 95% sensitivity. It is also therapeutic for extraction of biliary stones and stenting. In patients with cholelithiasis with choledocholithiasis presenting as obstructive jaundice, the ideal treatment is ERCP stone retrieval. First endoscopic sphincterotomy is done and using a Dormia basket stone extraction is done. It is followed by Laparoscopic cholecystectomy 6 weeks later. The complication of ERCP are bleeding, sepsis, perforation, pancreatitis. Alternatively Laparoscopic cholecystectomy and laparoscopic CBD exploration is done at the same time or Open cholecystectomy with Open CBD exploration is done at a same time. After choledochotomy T-Tube is kept in situ for 14 days. On 14th day T-Tube cholangiogram is done. If there is free flow of dye into the duodenum, T-Tube is removed.

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