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CHOLELITHIASIS -CASE REPORT

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ABSTRACT: A 45-year-old female patient was admitted in the Gastroenterology ward, with chief complaints of pain in the lower abdomen since, 1 week. The pain is sudden in onset and increase in severity, dragging in nature. No aggravating factors. Relieved on medication. No H/O burning micturition, loose stools. And has no similar history in the past. On evaluation it is shown to be the condition of cholelithiasis.

KEYWORDS - Gallstones, Cholecystectomy -

OBJECTIVE -To discuss the aetiology that can result in cholelithiasis in the patient; To evaluate the physical findings, laboratory test and diagnostic imaging tests in the patient. To review the various treatment options for the patient with cholelithiasis

INTRODUCTION:

- Gallstones (cholelithiasis) consists of deposits of digestive fluid that can form into a hardened stones in the gall bladder.
- The gall bladder is the small organ located just beneath the liver.
- The gall bladder holds the digestive fluids known as bile that is released into the small intestine.
- The stones can be small and one or more large stones, in many cases they do not produce any symptoms.
- The predisposing factors include:
 1. Changes in the composition of bile that can affect the solubility of its constituents.
 2. High blood cholesterol levels.
 3. Female gender
 4. Obesity
 5. Several pregnancies in young women, especially when accompanied by obesity.
 6. Diabetes mellitus.

EPIDEMIOLOGY:

- Cholelithiasis is quite common and can be found in approximately 6% of men and 9% of women.
- Highest prevalence rates of cholelithiasis in North American Indian affecting 64% of women and 29.5% of men. The epidemic of obesity has likely magnified the rise of gallstones.
- Despite of the prevalence, more than 80% of people are asymptomatic.
- Biliary pain will develop annually in 1% to 2% of patients with previously asymptomatic.
- Those who started to develop symptoms may continue to have major symptoms like cholelithiasis, choledocholithiasis, cholangitis, gallstone pancreatitis.
- TYPES OF GALLSTONES :
 1. Cholesterol stones account for more than 80% of gall stones. Usually seen in those with genetic or environmental predisposition. The cholesterol stones are composed of small amounts of calcium palmitate and bilirubinate salts.
 2. Black pigment stones occur due to haemolysis and consists mainly of calcium bilirubinate; pigmented gallstones are associated with other disorders such as Sickle Cell Anaemia, Beta-thalassemia.
 3. Brown pigment stones are linked with presence of bacterial infection or parasitic infection of biliary system.

ETIOLOGY– Over secretion of cholesterol by liver cells and hypomotility or impaired emptying of the gall bladder. High-fat foods should be avoided. Some drugs may also cause cholelithiasis like- octreotide, clofibrate. Hereditary may also one of the causes in few cases. Gall stone and obstruction in cystic duct. Bacterial infection – E. coli, Klebsiella, Clostridium and streptococcus.

PATHOPHYSIOLOGY– Decreased bile acids synthesis leads to increased cholesterol synthesis in the liver cause super saturation of bile with cholesterol. Formation of precipitates and form gall stones [cholelithiasis], if inflammatory changes take place is known as cholecystitis.

RISKFACTORS– Increasing age, female gender, family history, pregnancy, haemolytic anaemia, IBD, cirrhosis, Dyslipidaemia, rapid weight loss, diabetes mellitus.

EVALUATION :

1. Initial lab findings to evaluate gall stone often include CBC, lipase, Amylase, ALK phosphate, total bilirubin, urine analysis.
2. Ultrasound remains best Imaging source to diagnose gall stones.
3. CT imaging of abdomen does not add to increase sensitivity or specificity for diagnosis of gallstones. It helps to determine if any presence of dilation of common bile duct, pancreatic information etc.
4. Additional tests like magnetic retrograde cholangiopancreatography (ERCP/MRCP) are useful.

TREATMENT-

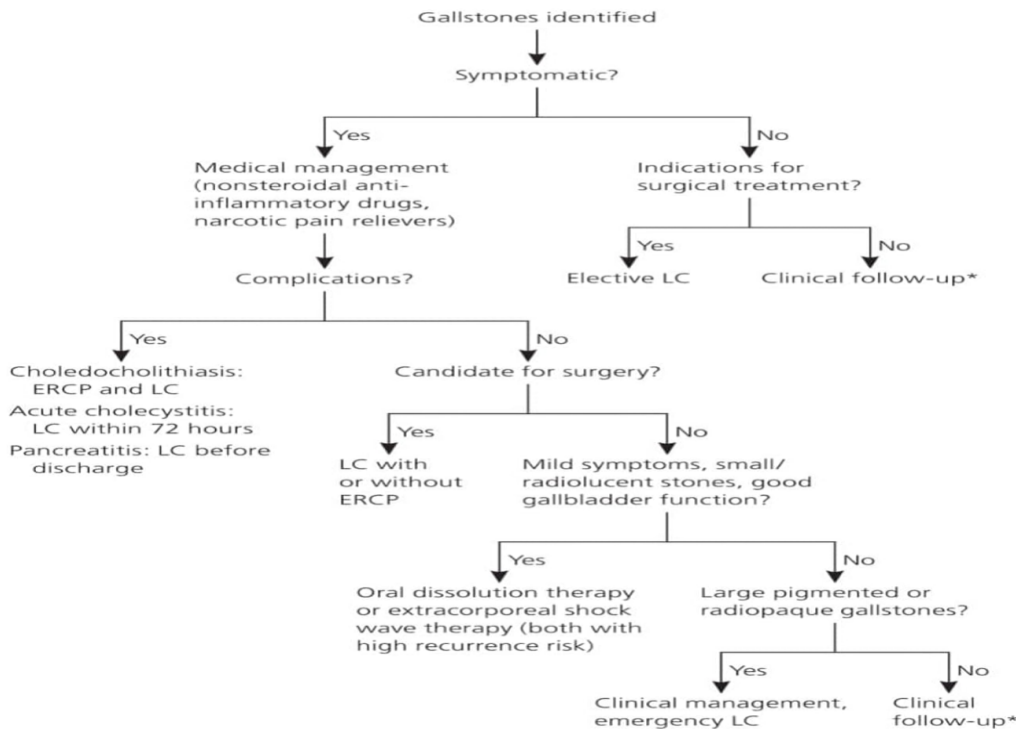
Treatment often depends on patient's presenting symptoms.

Uncomplicated cases often treated with appropriate analgesics, antibiotics.

Surgery-chronic cholecystitis is treated with elective laparoscopic cholecystectomy.

GALL STONE DISSOLUTION

URSODEOXYCHOLIC ACID [UDCA] – 10- 15mg/kg/day – with a functioning gall bladder with stone less than 10 mm.

Management of Gallstones

*—Exceptions to expectant management include patients with calcification of the gallbladder, hemolytic anemia, or large gallstones (greater than 3 cm); patients with small gallstones and gallbladder dysmotility; patients who are morbidly obese and undergoing bariatric surgery; patients planning to have a transplant; and Native Americans.

DISCUSSION :

The female patient of 45 years old was recently diagnosed with cholelithiasis. The patient was admitted in hospital with symptoms of lower abdomen pain. The patient was treated with medications like Analgesics [tramadol], NSAID'S [diclofenac] , Antibiotics[cefixime]. The attending physician has suggested the patient with laparoscopy cholecystectomy. The complications of gall stones and anaesthesia and laparoscopic cholecystectomy complications were explained to the patient.

COMPLICATIONS :

- Gall bladder inflammation leading to cholecystitis.
- Common bile duct blockage resulting in bile duct infection and jaundice.
- Pancreatic duct blockage which can cause pancreatitis.
- Cancer of gallbladder
- Cholecystoenteric fistula.

COMPLICATIONS OF ANAESTHESIA ARE:

1. Respiratory distress
2. Ventilator associated pneumonia.
3. Post procedure prolonged ventilatory support
4. Cardiac failure
5. Aspiration pneumonia

COMPLICATIONS ASSOCIATED WITH LAPAROSCOPIC CHOLECYSTECTOMY:

1. Bile leak
2. Liver injury
3. Gall stone Ileus
4. Paralytic Ileus
5. Converting to open laparotomy

And also explained the precautions to be taken like avoiding junk food, high cholesterol foods (low fat diet) . The patient will be needed to proper follow up with Gastroenterologist and about the regular usage of medications as prescribed.

PHARMACIST INTERVENTION :

- Iron supplements should be added to prescription which helps in maintaining the blood levels in the body.
- No adverse effects or ADRs were found.
- The patient should be monitored constantly because there is a high risk of chance of haemolytic anaemia in a patient because patient is receiving cefixime [cephalosporin drug] it causes haemolysis.

CONCLUSION :

Thus, the main motive of this report is to create the awareness about the patient condition of cholelithiasis. The treatment of cholelithiasis mainly focuses on the symptomatic relief to the patient by the disease condition while minimizing morbidity and maintaining a track progress and explaining potential surgical & interventions if they become necessary by the gastroenterologists and surgeons.

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