RESEARCH PAPER | Medical Science | Volume : 5 | Issue : 2 | Feb 2015 | ISSN - 2249-555X

Concomitant Laparoscopic Cholecystectomy and Splenectomy in Sickle Cell Disease:a Case Report

KEYWORDS

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ABSTRACT *Sickle cell disease is a hereditary hemolytic anaemia leading to abnormal shaped redcells (sickle shape) leading to excessive sequestration of red cells in the spleen. we present a 28 year old male patient with pain in the right hypochondrium,jaundice,anaemia and pyrexia of 10 days duration History of multiple blood transfusions.Haemogram suggested sickle cell disease and confirmed by haemoglobin electrophoresis.USG of the abdomen revealed multiple gall stones,mild hepatomegaly.Spleen was markedly decreased in size measuring 3.16 x 4.66 cm with dense calcification in the entire parenchyma.(autosplenectomy) concominant laparoscopic cholecystectomy and splenectomy was performed in our patient.*

INTRODUCTION:

Sickle cell disease is a hereditary hemolytic anaemia and primarily occurs in the black population in whom the normal haemoglobin A is replaced by haemoglobin S (HbS). The haemoglobin S molecule adopts a sickle shape at low oxygen concentration leading to excessive sequestration of red cells in the spleen and aggravates anaemia . The patients present with anaemia,jaundice and abdominal pain. Untreated cases may show pigment gallstones and splenomegaly.Later increased blood viscosity may obstruct the flow of blood in the spleen leading to splenic infarcts and shrunken spleen(autosplenectomy).In 1991,Delatine reported the first laparoscopic splenectomy.Laparoscopic cholecystectomy and splenectomy has been reported in children so far.Here we present a case of concomitant laparoscopic cholecystectomy and splenectomy in an adult male of 28 years old.

CASE SUMMARY:

A 28 year old gentleman presented with vague pain in the right hypochondrium, jaundice and fever since 10 days History of multiple blood transfusions Haemogram suggested sickle cell disease and confirmed by haemoglobin electrophoresis.USG of abdomen revealed multiple gall stones and mild hepatomegaly. Spleen was markedly decreased in size measuring 3.16*4.66cm with dense calcification in entire parenchyma.(autosplenectomy) concominant laparoscopic cholecystectomy and splenectomy was performed.The post operative period was uneventful.

DISCUSSION:

In sickle cell anemia, RBCs undergo sickling in hypoxic states and these abnormally shaped cells undergo sequestration in the spleen.The lysed RBCs block the splenic vessels resulting initially in an enlarged spleen and ultimately in a shrunken fibrotic non-functional spleen leading to vague upper abdominal pain.Excess bilirubin generated from the lysed RBCs results to jaundice and gall stone formation.Surgery in the form of splenectomy and cholecystectomy is considered optimum therapy as it prevents both premature death of erythrocytes and hyperbilirubinemia. Open and laparoscopic approaches are adopted.We performed a concomitant laparoscopic cholecystectomy and splenectomy in our patient.

CONCLUSION:

Concomitant cholecystectomy and splenectomy is a safe and feasible surgical procedure in sickle cell disease .It requires more time and associated with a steeper learning curve but results in fewer post operative complications, a shorter hospital stay, smaller incisions,better cosmesis and faster recovery.

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