

EDITORIAL

Risks and complications of portal hypertension with Pregnancy

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Abstract:

Portal hypertension is a common daily encountered health problem in endemic Schistomaiasis areas in Sudan. Females at child bearing age with portal hypertension and its complications are considered as a clinical challenge for general practitioners, obstetricians and gastroenterologists, especially when presenting during late trimesters with unplanned pregnancy.

Portal hypertension with pregnancy per say is considered as risky combination, with a significantly high morbidity and mortality for both mother and fetus. Affected mother might develop hazardous bleeding (hematemesis, malena or postpartum hemorrhage), hepatic encephalopathy or even death in 2- 18% of cases. Additional complications can be faced due to associating anemia, enlarged spleen or liver and possible pancytopnea, which may affect the course of pregnancy and mode of delivery.

Fetal loss is a recognized complication, ranges between 11- 18%. Fetal death usually happens as a consequence of preterm delivery, intrauterine growth restriction (IUGR) and/or intra uterine jeopardize .

Here is a reporting case of young lady who presented to an obstetric unit in her third trimester with an unbooked and unplanned pregnancy, with history of repeated cesarean sections, post Schistomaiasis portal hypertension , pancytopnea, and intra uterine fetal death .

High risk cesarean section was performed after optimizing her general condition, correcting of her anemia, coagulation profile and platelets, in spite of the ongoing effect of her hypersplenism which was further complicated by IUFID induced DIC.

In conclusion,. An agreed protocol involving gastroenterologist and obstetrician is warranted for care of such a patient pre- conceptionally, antenatal, intra partum and post partum. Management of such a patient should only be done at tertiary care centers by a multidisciplinary team with good facilities for intensive care and blood transfusion.

Key Words: portal hypertension, pancytopnea, Multidisciplinary approach

Introduction:

Pregnancy with portal hypertension is considered as not uncommon condition in the developing countries; patients with non cirrhotic portal fibrosis are surviving to adult life ⁽¹⁾ and in a good medical condition can become pregnant. Even in patients with cirrhosis, as long as liver function is relatively preserved, pregnancy is possible. ⁽²⁾

With the advanced methods available now for early diagnosis and management, obstetricians might see more patients with portal hypertension and chronic liver disease and should be aware of the course of the disease during pregnancy and the management strategies.

Case Report:

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A 35-years-old Sudanese lady, who was a known patient of non cirrhotic peri portal fibrosis (NCPF), presented at her 33 weeks of gestation with complaints of an absent fetal movement for two weeks. She was unbooked in Khartoum Teaching hospital with poor follow up for her medical and obstetrical situations. There was no fever, jaundice or hematemesis at the presentation. Upper gastrointestinal endoscopy was done during current pregnancy and revealed the presence of grade III varices. The patient was hospitalized before and given Propranolol 20mg three times a day. There was history of bleeding tendencies, blood transfusion and repeated band ligations. Obstetrically, she had two previous cesarean sections with four living babies and no history of miscarriage.

Examination revealed pallor, and massive splenomegaly. There was no hepatomegaly or stigmata of chronic liver disease. Uterine size was 28 weeks which was less than the period of gestation.

Scan examination confirmed the IUFD with a massive splenomegaly (22.7 cm below costal margin), portal vein diameter of 18 mm with dilatation of portal collaterals and no ascitis.

Liver functions were normal and coagulation parameters were impaired. Markers of infective hepatitis were negative by Elisa test. Pancytopenia was present and attributed to hypersplenism.

The clinical dilemma was the presence of marked pancytopenia, IUFD with its psychological burden and hematological consequences in a form of DIC and sepsis.

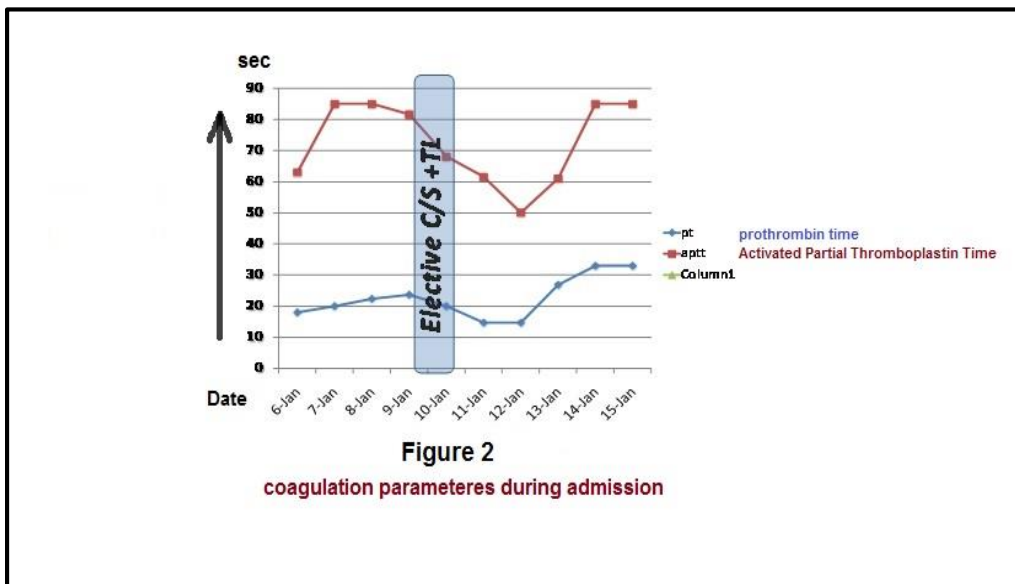
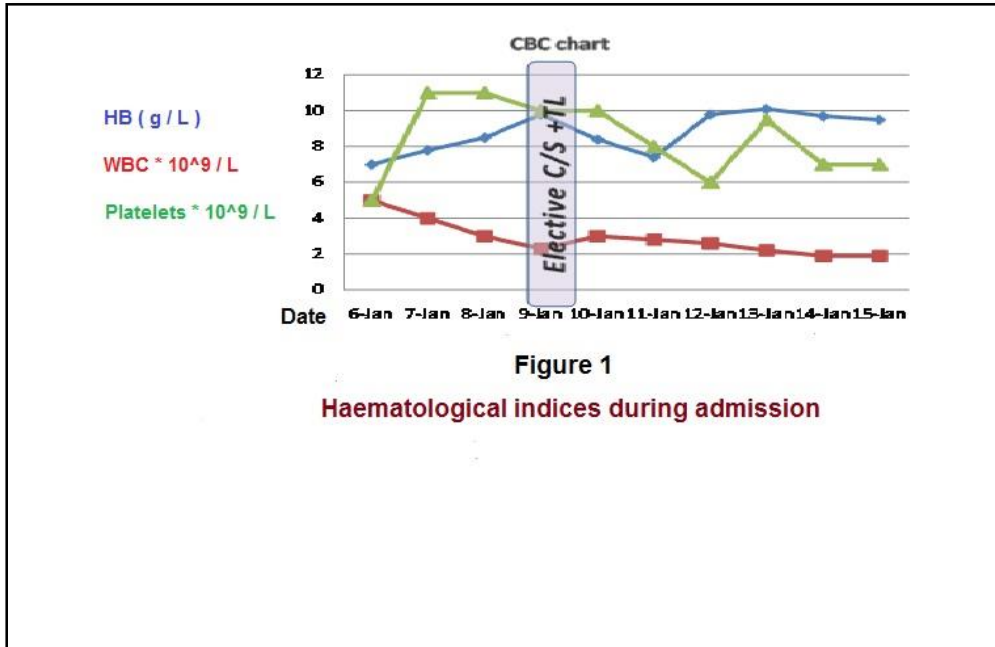
The main objective was to have planned delivery after optimizing her health status in term of correcting her anemia, coagulation profile and her platelet counts putting in mind that Hypersplenism was an ongoing process working against the current situation waiting for spontaneous labor was unpredictable and unsafe, put the mother at risk of DIC and may occur in suboptimal status .The safety and success of induction of labor in a woman with two previous cesarean section is questionable. Cesarean section had the risk of intra operative and post operative hemorrhage. Consensus decision was made; the patient was taken for elective LSCS with tubal ligation T.L after correction of anemia, platelets, coagulopathy and obtaining high risk consent.

The management plan for each phase (pre operative, intra operative and postoperative) was made in corporation with the multidisciplinary team(obstetrician, gastro- intrologist, anesthetist and hematologist) , which was the key of success in such situation. To correct the hematological deficit due to hypersplenism, five units of packed cells had been transfused preoperatively in addition to six units of platelets and 12 fresh frozen plasma. I.V. fluids were given cautiously.

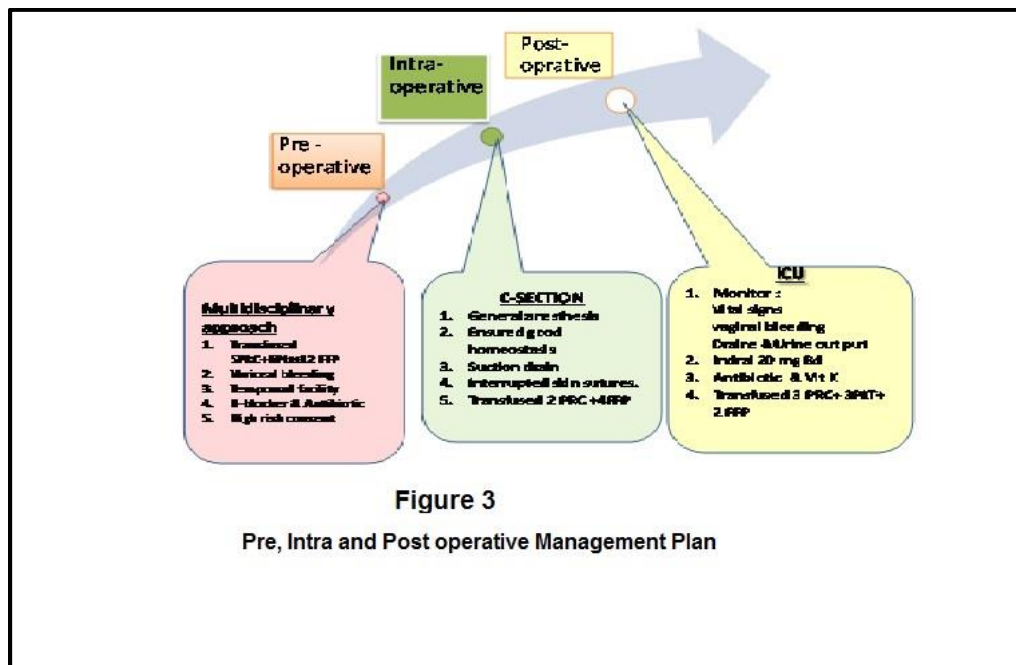
According to input/output charts, with broad spectrum antibiotics covering. All measures were made to guard against unpredictable hematemesis. General Anesthesia was the preferable option to avoid cord hematoma as complication of Lumbar puncture in spinal Anesthesia. Intra operative, measures aiming to reduce the risk of hematoma formation were insured by achieving good homeostasis, continuous suction drainage and closing the skin incision by interrupted suture.

Patient was shifted to the ICU from the recovery room. Monitoring the vital signs, the suction drainage for any bleeding and repeated CBC, coagulation profile and liver function tests and patient was treated accordingly. Postoperative recovery was uneventful. One week later, patient was discharged in a good condition with appointment with obstetrician, gastroenterologist and a surgeon; later on splenectomy and shunts surgery were performed.

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**Discussion:**

The objective of this presentation is that, the number of women with portal hypertension in childbearing age is increasing and most of them are cared of by gastroenterologists without exploring their plan to complete their family. On the other hand most of obstetricians need to aware of how to deal with such patients when become pregnant or come in labor. In addition there is no effective national protocol in Sudan yet for management of this condition.

Women with such condition should have planned pregnancy and should be offered preconception counseling after full clinical assessment to evaluate the severity of her condition, review her medications and optimize her health status and then make a plan for her antenatal, intra partum and postpartum care.

The assessment should include the cause and severity of portal hypertension, presence of chronic liver disease, liver functions and most significant the presence and grade of esophageal avarices, splenomegaly and the presence of evidence of hypersplenism.

Women should be advised against pregnancy if there is evidence of decompensated liver cirrhosis, recurrent hematemesis and deranged liver functions, *especially* abnormal coagulation profiles and could be an indication of termination of pregnancy if it occurs⁽¹⁾.

Prognosis of portal hypertension during pregnancy depends upon the underlying cause, the extent of derangement of liver function and the fetus condition.⁽²⁾ It is generally observed that maternal prognosis is better with non cirrhotic periportal fibrosis and poor with cirrhosis of the liver.⁽⁴⁾ Maternal mortality ranges between 2% - 18%; being maximum with cirrhosis⁽³⁾

The causes of death are generally hematemesis, hepatic coma or postpartum haemorrhage⁽³⁾. Foetal mortality ranges between 11% and 18%, mainly due to preterm delivery, intrauterine growth restriction (IUGR) or intra uterine jeopardize⁽⁴⁾

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Physiologically, obstruction of the inferior vena cava by the gravid uterus can lead to increased portal pressures and increase the risk of Hematemesis during pregnancy ⁽⁵⁾

Women with cirrhosis has 20 -30 % risk of developing hematemesis during pregnancy with high mortality rate reaching up to 60 %.⁽²⁾ On the other hand studies showed that the incidence of hematemesis in patients with non cirrhotic periportal fibrosis (NCPF) is around 7 %. The timing and severity of hematemesis are unpredictable and is more common in pregnancies complicated by varices.⁽⁶⁾

The frequency of variceal bleeding in pregnant women with non cirrhotic portal hypertension is lower if they have had treatment for esophageal varices prior to pregnancy, e.g. by endoscopic injection sclerotherapy or a decompression operation. In one Indian study, 50 pregnancies in 27 women with portal hypertension were followed. The rate of bleeding in 35 females who had been diagnosed and treated prior to conception was 8.6%, compared to a rate of 93% in 15 pregnancies in which disease was diagnosed during pregnancy ⁽¹⁾. Accordingly, they recommended that in women with bleeding varices during pregnancy, treatment with sclerotherapy is considered a reasonable and appropriate intervention, with the use of beta-blocker for prevention of re-bleeding ⁽⁷⁾.

Management of portal hypertension in pregnant women is similar to that in non-pregnant patients. Beta blockers are given to reduce portal venous pressures. Many reports showed that banding and sclerotherapy can be carried out successfully during pregnancy ⁽⁸⁾

Hypersplenism should be under supervision throughout pregnancy and correction of blood elements is essential. The place of splenectomy during pregnancy in a patient with hyperinsilim should be weighted against the risks of repeated transfusion and death from specially employed during pregnancy ⁽⁹⁾.

Vaginal delivery is not contraindicated and caesarean section should only indicated for obstetric reasons .Special intra partum care for all labour stages is of paramount importance under the supervision of multidisciplinary team. It is mandatory to have a Sengstaken -Blackmore tube and adequate amount of cross matched blood readily available if these patients are given a trial of labor. Bearing down and straining are associated with high risk of variceal rupture and hematemesis .Shorting of the second stage with ventuose is advisable. Observation and guarding against postpartum hemorrhage and sepsis will reduce the morbidity and mortality significantly.
⁽¹⁰⁾

Conclusion and recommendations:

- Effective national protocol for management of portal hypertension with pregnancy should be established and by multidisciplinary team
- Pre- conceptional counseling program for ladies with portal hypertension should be considered especially in endemic areas of schistosomiasis
- Facilities for intensive care and blood transfusion are essential elements for management of pregnant lady with portal hypertension

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