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Case Report On 20-Year-Old Female Patient With Pancytopenia With Known Case of Cirrhosis of Liver With Portal Hypertension and Splenomegaly

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Abstract
Introduction: - Pancytopenia is a condition in which decrease level of RBC, WBC and platelets which cause anemia, Leukopenia . Thrombocytopenia is a condition in which the platelet count is low. The risk of splenic rupture has been associated with hepatic cirrhosis, splenomegaly, and portal hypertension. A case with pancytopenia, cirrhosis of the liver, portal hypertension, and splenomegaly, aggravated by hypersplenism and splenic intra cystic hemorrhage. **Present complaints and investigations:-** A20 year old female patient registered to the medicine department with the main complaints of fever with chills 2 day's vomiting 2 day's , body aches, weakness after physical examination and investigation carried out and she was diagnosed pancytopenia, she was known case of cirrhosis of liver with portal hypertension with splenomegaly for that she taking a medication for 5 years. **The main diagnosis therapeutic interventions and outcomes**:- the doctor identified a case of pancytopenia, cirrhosis of liver with portal hypertension with splenomegaly. After physical examination and investigations. Injection cefatoxime 19mg IV TDS, Injection metrogyl 100ml IV TDS, injection Pantop 40 mg OD, Injection Emset, injection Optineronlarpin 100 ml with normal saline iv OD, Tablet Rifagalt 550 mg BD, Tablet ciplar LA 40 mg OD, syrup duplac 30 ml, protein powder 2 test spoon. Supplements was given all the treatment was taken and results was good. **Conclusion:-** She responded to both medicine and physician. Her fever was reduced. Abdominal pain and body aches diminished
Keywords:-pancytopenia, splenomegaly, cirrhosis of liver, portal hypertension

Introduction:-

Pancytopenia is a disorder in which all three blood cell types, red blood cells, leukocytes, and platelets, decline.[1]

Many disorders influence the generation of these cells in the bone marrow, resulting in pancytopenia, or the occurrence of anaemia, leucopenia, and thrombocytopenia all at the same time. However, due to the considerable variety and a limited source of reviews, its mechanism, occurrence, and prognosis are poorly known. It is thought to have occurred as a result of splenic pathology. [2] One of the most important pathophysiologic factors that increases the risk of splenic rupture is liver cirrhosis with splenomegaly and portal hypertension[3].

Portal hypertension is a condition in which the pressure inside the portal vein, which transports blood from the digestive organs to the liver, increases[4]. Cirrhosis of the liver is the most common cause, however thrombosis (clotting) is also a possibility. Patients with liver cirrhosis, splenomegaly, and portal hypertension, which was made worse by intra-cystic hemorrhage and hypersplenism.[5] Splenic anatomic anomalies such as large splenic cysts, hematoma, and infarction have also been linked to splenic

rupture[6-7]. In a spleen that appears normal or has been made vulnerable by a previous disease, however, intra-cystic hemorrhage lesions are uncommon. [8] As a result, we feel our case is unique in that it involves a tiny splenic hemorrhagic cyst that ruptured a traumatically in the presence of cirrhosis, splenomegaly, portal hypertension, and hypersplenism[9].

Patient information patient relevant information: A case of 20 year old female admitted to AVBRH hospital in (HDU) on date with the complaint of fever abdominal pain, body aches, vomiting, nausea, now sew come AVBRH for further treatment of pancytopenia, cirrhosis of liver with portal hypertension with splenomegaly primary concern and symptoms she was fever 2 days, severe body aches abdominal pain, vomiting, she was apparently alright. One month back it was onset and progress. It was mild and moderate fever, abdominal pain. She was admitted in various hospitals for treatments, after a few days when she took treatments for that. Then she come to AVBRH hospital for further management of pancytopenia , cirrhosis of liver with portal hypertension with splenomegaly.

Medical family and psychological history :-she was admitted in private hospital, history of Banding 4 year back. No history of diabetes mellitus, hypertension, bronchial asthma, was taken in form of oral medication ciplar LA 40. She was known case of cirrhosis of liver with portal hypertension with splenomegaly from 5 to 6 year and on medication she took treatments for that. She Maintain good interpersonal relationships between the family members and other. She was no family history of diabetes mellitus, hypertension, asthma and liver disease renal or autoimmune disease. Her bowel and bladder habit was normal sleeping pattern was normal.

Physical examination and clinical findings:- The patient was awake, cooperative, and aware of time, place, and person at the time of the examination. Height: 150cm weight: 52 kg vital signs – Temperature: 103f°, Respiratory system: air entry bilaterally equal. Cardiovascular system: s1s2 heard, no muscular heard abdominal examination: mild distension soft, non tender
Timeline:- 5 to 6 months Back she taking treatment in private hospital, after physical examination and investigations doctor diagnosed liver cirrhosis with portal hypertension with splenomegaly. And medications are continue. She having fever, abdominal pain, nausea vomiting, body aches their hemoglobin levels decrease and platelets decrease, 3 days now she admited in AVBR hospital for further management

Diagnostic assignment:- On the basis of Patient history, physical examination, Blood investigations were also done hemoglobin 7.8gm decreased, WBC Count 800cu.mm decreased, HCL 36.7, MCHC 32.1, MCV 70.3,, MCH 22.6, total platelet count 0.15was decreased, HTC 24.1 Granulocytes 55, RDW 19.5 increases , monocytes 03, lymphocytes 40, eosinophills02, basophiles 00 ,total RBC count 3.43, **USG** shows course echotexture of liver, splenomegaly with dilated splenic vein **X-ray** and **ECG** were done

Diagnostic challenges:-No any challenging during diagnostic evaluation
Diagnosis: - After physical examination and investigations doctor diagnosed pancytopenia (treated) with cirrhosis of liver with portal hypertension with splenomegaly .
Prognosis:- After getting treatment prognosis was satisfactory. The liver with portal hypertension and splenomegaly is a complication of an underlying liver illness that can be managed with dietary restrictions and abstinence from alcohol and narcotics. Survival chances can be high as long as some liver function is preserved. The prognosis is worsened by poor liver function.

Therapeutic interventions:- medical management was provided to patient. The initial care of the patient was started on injection paracetamol 250mg injection Doxycycline, injection . Pantop, 40mg, injection

Emset 4 mg, injection Optineuron AMP in 100 ml NS, Tablet Rifagut 550 mg, tablet ciplex 40 mg, syrup Duphalac 30 ml, protein powder 5 Tsp daily. D. Rise sachets with 1 Cup of milk once a week and for One month, blood transfusion was given platelets was given for correction of pancytopenia . Nursing care given to the patient DNS and RL fluid administered, Check vital signs and blood pressure 2 hourly, maintaining intake and output chart. As well as ensuring that she gets enough rest and sleep, nutritional diet was provided to patient. Protein rich diet advice for the patient.

Follow up and outcomes:- clinical and patient assessment outcomes symptomatic relive of abdominal pain, reduce fever, vomiting and body ache condition was improved. Health education delivered on she also diet, she was taking medication regularly important follow up and diagnostic and other test results :-to discourage disease progression and attempt to stop sign and symptoms, that have arisen. After 3 weeks doctor recommended for follow up.

Discussion:

A case of 20 year female admitted to AVBR hospital in medicine HDU with the complaint of fever, body aches, vomiting, abdominal pain. She was known case of cirrhosis of liver with portal hypertension with splenomegaly. From 5to 6 years and on medication. Now she comes in AVBR hospital for further treatment of pancytopenia with cirrhosis of liver with portal hypertension with splenomegaly. Patient was tested for covid 19 with rapid antigen test, which was negative; patient was shifted medicine opd to medicine HDU. All routine investigations was done, report were hemoglobin upto 9.4, and platelets were reduced up-to 30,000 coagulation profile of the patient was deranged, liver function test also deranged. Patient was started on injection doxycycline, injection pantop, infection Emset and other supportive medications. Patient was referred to gastroenterologist in view of above complaints, on examination was advised injection felgastrin 300 MCG SC BD and on controlling pancytopenia, once pancytopenia is improved .

Cirrhosis, also known as liver cirrhosis or hepatic cirrhosis, and end-stage liver disease, is a condition in which the liver's function is compromised due to the creation of scar tissue called fibrosis as a result of liver disease damage.[10] Damage induces tissue repair and the creation of scar tissue, which can eventually replace normal working tissue, resulting in cirrhosis and decreased liver function.[11] Studies on cytopenia[12-15] and liver cirrhosis[16-17] were reviewed.

Informed consent: Before taking this case, information was given to the patients and theirs, and informed consent was obtained from the patient as well as relatives.

Conclusion:

In this case present have pancytopenia, with cirrhosis of liver with portal hypertension with splenomegaly after giving treatment and nursing care patient health was improved. Pancytopenia has been treated by transfused PC. Hemoglobin increase 9.4 platelets increased up-to 30,000 patient health's was improved. Onces pancytopenia is improved advice for liver biopsy, further management was would depend on report of biopsy, further investigation, management the patient was not willing, and asked for discharge on request patient are willing to come for liver biopsy after 15 days patient has been taken for trans jugular liver biopsy.

Conflict of Interest: No conflict of Interest
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