



## Case Report: Budd Chiari Syndrome

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### **Authors' contributions**

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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**Case Study**

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## **ABSTRACT**

Budd-syndrome Chiari's is a rare condition is causes by obstruction to hepatic venous outflow. The female patient 25-year old who was admitted to Acharya Vinoba Bahave Rural Hospital on date 19/06/2019. 4 months ago, she noticed that her abdomen had become prominent. Her appetite became poor and she had vomiting bouts whenever she took food. A detailed clinical evaluation of the The syndrome of Budd-Chiari is based on a comprehensive history of of the patient, angiography is often used to assist in the diagnosis. The treatment also uses (MRI) and ultrasound technique. If the condition is detected early, treatment of Budd-Chiari syndrome is more effective. Large doses of corticosteroid, prednisone can also be recommended as heparin like anticoagulants can be efficient in the treatment of Budd-Chiari syndrome individuals. However, the condition typically has an acute onset and can become chronic later in life. The present case with right anticoagulant therapy, early diagnosis and successful treatment is reported.

**Keywords:** Syndrome of Budd-Chiari; hepatic venous outflow; hepatomegaly.

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## 1. INTRODUCTION

Budd Chiari syndrome is a rare disorder characterised by obstruction to hepatic venous outflow. Budd Chiari syndrome signs include discomfort in the upper right part of the abdomen, hepatomegaly and ascites. Other condition associated findings can include nausea, vomiting. Severity of the condition varies according to the location and number of veins affected. For certain instances, In portal hypertension, elevated blood pressure in the veins that carry blood from the gastrointestinal (GI) tract back to the heart via the liver. When it involves the major hepatic veins. The main source of the Budd-Chiari syndrome is in most cases [1].

**Incidence:** Budd-Chiari syndrome affects similar numbers of men and women. Many cases affected people between the ages of twenty and forty.

### 1.1 Objective

1. To know general idea about the condition of the disease.
2. Exploring knowledge of pharmacology, management of medicine and nursing.

## 2. CASE PRESENTATION

### 2.1 Patient History

The 25-year-old female patient admitted to Acharya Vinoba Bahave Rural Hospital on 19/06/2019 her condition dates to 2 years earlier when she found a sudden swelling of her abdomen. She was admitted to care hospital and later released from the hospital with a diuretic. No definite diagnosis has been made. She had seen her doctor on and off for treatment since then in order to keep his abdominal swelling down. She found that her abdomen was becoming prominent four months before this present admission. Her appetite was low and when she took food she had bouts of vomiting. There was no jaundice past and she wasn't breathless. There was no significant background history. There was no other family history of meaning After all examinations such as chest X-ray, abdominal X-ray, electrocardiogram, 2 day echo, Barium swallow, CBC, urine test, etc. were admitted to the hospital [2].

### 2.2 Causes

The particular source of around Of all the cases of Budd-Chiari syndrome, 70% are unexplained. Around 10% of individuals with Budd-Chiari syndrome have Vera polyglobula. Symptoms arise when the main veins which bring blood from liver to the heart become blocked. Many known causes may include radiation exposure, asbestos, trauma, blood poisoning (sepsis), monomer vinyl chloride, cancer, certain chemotherapy medications, and the use of birth control pills [3].

### 2.3 Clinical Finding

Symptoms related to Budd-Chiari syndrome involves abnormally swollen liver pain in the upper right portion of the abdomen (hepatomegaly.), excessive swelling due to irregular fluid accumulation (edema) and decreased appetite, and vomiting bouts after food was taken [4].

### 2.4 Investigations

Studies found that haemoglobin concentration was 9.9 gm percent, pack cell volume 31 percent, mean corpuscular haemoglobin concentration 31.9 percent, total white blood cell count 6300/cy76u mm with 76 percent polymorphs, 15 percent lymphocytes, 6 present eosinophils and 3 percent monocytes, and erythrocyte sedimentation rate 97 mm per hour. Her level of blood sugar was 128 mg percent, blood urea was 66 mg percent, and electrolytes were: 140 Sodium meq/l, potassium 3.2 meq/l and 108 meq/l chloride [5].

Syphilis test was negative. Tests for liver function were performed and found to be normal except for serum alkaline phosphatase which was 460 i.u. With 3 gm albumin percent and 4.5 gm globulin percent, serum protein was 7.5 gm percent. Urine tests found no abnormality. Stool exam revealed occult blood but no ova or cyst was seen. Electrocardiogram was normal, and showed no proof of pericarditis. Because of the ascites and enlarged liver her chest X-ray was normal except for the raised diaphragm. There was no calcification of abdominal x-ray. Even Ba swallow and follow through was performed and this showed no varicose veins and good stomach. Fluoroscopy was performed to remove constrictive pericarditis, but this showed strong pulsation of the heart. Peritoneal fluid contained 1gm percent of protein but no pus cell existed and no growth was obtained on crop. Patient had

a laboratory performed and this confirmed chronic Budd-Chiari syndrome diagnosis due to ascites and decreased liver [6].

### 3. TREATMENT

#### 3.1 Medical Management

Treatment of Budd-Chiari Syndrome is most effective with early diagnosis of the condition. There are specific recovery approaches, as well. It can also be treated using high doses of the corticosteroid medication, prednisone. Drugs that interfere with blood clotting (anticoagulants) such as heparin can be helpful in treating people with Budd-Chiari Syndrome [7].

#### 3.2 Surgical Management

Surgical Enlargement (dilatation) of affected veins (angioplasty) in the walls of the vessel may relieve high pressure. In certain cases the By putting off blood supply, Budd-Chiari syndrome may be surgically treated. (Shunting) against one vein to the next. It is possible to clear a blocked vein and then insert a slender pin (stent) into the vein to promote blood flow. Hepatic transplantation may be required in severe cases of Budd-Chiari syndrome [8].

#### 3.3 Nursing Management

The nurse is responsible for prescribing the medications and determining their positive and negative effects on the patient. The type and dosage of the pharmacologic treatment is determined by the combination of these effects. Actions in nursing to measure clinical efficacy include the following:

- Promote rest
- Improving or change in quality of nutrition
- Caring for the skin
- Minimizing skin Damage.

#### 3.6 Monitoring and Managing Potential Problems

- hemorrhage and Bleeding
- Liver encephalopathy
- Excess Fluid volume

#### 3.7 Nursing Diagnoses

The key diagnosis is possible to classify patients with Budd-Chairi Syndrome on the basis of assessment results.

- Activity intolerance ( risk for Intolerance to activity) linked to fatigue, lethargy and malaise
- Excess fluid volume related to ascites and edema formation
- Imbalanced nutrition less than body requirement related to abdominal distention and discomfort and anorexia
- Impaired skin integrity related to pruritus from jaundice and edema
- High risk for injury related to altered clotting mechanism and altered level of consciousness

**Collaborative Problems/ Potential Complications:** Based on the assessment results, the following may include possible complications:

- Bleeding and Hemorrhage
- Hepatic encephalopathy
- Fluid volume Excess
- Pericardial effusion and cardiac tamponade

#### 3.8 Continuing Care

Patient reference can help the patient handle the transition from hospital to home. The nurse at home assesses the progress of the patient at home and the way the family and patients cope with alcohol abolition and dietary constraint. The nurse reinforces the concerns that the patient or the family may not have asked until the patient is back home and is trying to establish new trends in study [9].

#### 3.9 Evaluation

##### 3.9.1 Expected patient outcomes

Expected patient outcomes may include:

##### 3.9.2 Participate in project

- a. plan activities and exercise to allow alternating periods of rest and activity
- b. Reports increased strength and well- being
- c. Participate in hygiene care

##### 3.9.3 Increased nutritional intake

- a. Demonstrate intake of appropriate nutrients and avoidance of alcohol as reflected by diet log

- b. Reports decrease in GI disturbance and anorexia
- c. Adhere to vitamin therapy regimen

#### 3.9.4 Exhibits improved skin integrity

- a. Has clean skin and has no signs of deterioration, infection or trauma
- b. Exhibits natural skin and trunk turgor, without oedema
- c. Change position frequently and inspect bony prominence using lotions daily to reduce pruritus.

#### 3.9.5 Avoids injury

- a. use side rails and ask assistance to get out of bed
- b. plan to prevent trauma

### 4. DISCUSSION

Hepatic venous obstruction of Budd Chiari syndrome was well known. More recent studies indicate a similar photograph of Budd-Chiari syndrome due to the lower vena obstruction. It is difficult to determine the cause of such obstruction. In the past, different causes were identified. Invasive organ neoplasm's, thrombophlebitis migrate, portal pyemia or clotting diseases including polycythemia, all these include developmental anomaly. This applies. Typically, the syndrome starts acute and can be chronic later. The prominent features of this Condition are usually ascites, swollen liver and prominent abdominal veins that do not respond to treatment. The hepatic capsule detention can result in the vomiting of patients with Chiari-Budd syndrome frequently experienced. A poor sign is extreme watery diarrhea, which may signify the final stage of the disease. The explanation for this is the mesenteric blockage of the vein. Chronic constrictive pericarditis, retroperitoneal fibrosis and cirrhosis of the hepatography were other conditions that may present with very similar characteristics [10]. Taksande reported about a rare case of Budd-Chiari syndrome in a child [1]. Garg conducted a correlation study of coagulation profile in spectrum of liver diseases [12]. Articles related to liver and associated diseases are reported [13,14,15].

### 5. CONCLUSION

Typically, the syndrome starts acute and can be chronic later. The prominent features of this Condition are usually ascites, swollen liver and

prominent abdominal veins that do not respond to treatment. The hepatic capsule detention can result in the vomiting of patients with Chiari-Budd syndrome frequently experienced. Extreme watery diarrhoea is a troubling indication and may suggest terminal disease. Chronic constrictive pericarditis, retroperitoneal fibrosis and the supply of cirrhosis are more triggers that may have relatively similar characteristics. For Budd-Chiari syndrome diagnosis, hepatography has been used.

### CONSENT

The patients and their family have been given details before taking this case and the patient and their families have received informed consent.

### ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

### COMPETING INTERESTS

Authors have declared that no competing interests exist.

### REFERENCES

1. Budd Chiari Syndrome [Internet]. NORD (National Organization for Rare Disorders). [cited2019 Jul 2]. Available:<https://rarediseases.org/rare-diseases/budd-chiari-syndrome/>
2. Gedam S, Dhabarde A, Patil P, Sharma A, Kumar K, Babar V. Psychiatric Comorbidity, Severity of Dependence and Liver Enzymes Dysfunction among Alcohol Dependent Individuals: A Cross-sectional Study from Central Rural India. *J Clin Diagn Res.* 2019;13.
3. Budd Chiari Syndrome - NORD (National Organization for Rare Disorders) [Internet]. [cited2019 Jul 2]. Available:<https://rarediseases.org/rare-diseases/budd-chiari-syndrome/>
4. Budd-Chiari syndrome: Causes, Symptoms, Treatment & Outlook [Internet]. Cleveland Clinic. [cited2019 Jul 2]. Available:<https://my.clevelandclinic.org/health/diseases/21097-budd-chiari-syndrome>
5. Balwani M, Bawankule C, Ramteke V, Pasari A. Hepatitis C virus, directly acting

- antivirals and Guillain-Barré syndrome. Saudi J Kidney Dis Transplant. 2018; 29(5):1237.
6. Goel RM, Johnston EL, Patel KV, Wong T. Budd-Chiari syndrome: investigation, treatment and outcomes. Postgrad Med J. 2015;91(1082):692–7.
  7. Budd-Chiari syndrome. Genetic and Rare Diseases Information Center (GARD) – an NCATS Program [Internet]. [cited2019 Jul 2]. Available: <https://rarediseases.info.nih.gov/diseases/5968/budd-chiari-syndrome>
  8. Budd-Chiari Syndrome: Current Management Options [Internet]. [cited2019 Jul 2]. Available: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1421281/>
  9. Lewis's Medical-Surgical Nursing - 5th Edition [Internet]. [cited2019 Jul 2]. Available: <https://www.elsevier.com/books/lewis-medical-surgical-nursing/brown/978-0-7295-4292-0>
  10. Brunner & Suddarth's Textbook of Medical-Surgical Nursing [Internet]. [cited2019 Jul 2]. Available: <https://shop.lww.com/Brunner--Suddarth-s-Textbook-of-Medical-Surgical-Nursing/p/9781496347992>
  11. Taksande A, Meshram R, Yadav P, Borkar S, Lohkare A, Banode P. A Rare Case of Budd Chiari Syndrome in a Child." International Journal of Pediatrics. 2017;5(10):5809–12. Available: <https://doi.org/10.22038/ijp.2017.25157.2131>.
  12. Garg, Reetika Parmod, Anil Agrawal, Arvind Sridhar Bhake, Sunita Vagha. Correlation Study of Coagulation Profile in Spectrum of Liver Diseases. Journal of Evolution of Medical and Dental Sciences-Jemds. 2020;9(8):549–54. Available: <https://doi.org/10.14260/jemds/2020/123>.
  13. Gedam, Sachin Ratan, Ajab Dhabarde, Pradeep S. Patil, Animesh Sharma, Kanika Kumar, and Vijay Babar. "Psychiatric Comorbidity, Severity of Dependence and Liver Enzymes Dysfunction among Alcohol Dependent Individuals: A Cross-Sectional Study from Central Rural India." Journal of Clinical and Diagnostic Research. 2019;13(4):VC1–5. Available: <https://doi.org/10.7860/JCDR/2019/40368.12759>.
  14. Jain, Jyoti, Ramji Singh, Shashank Banait, Nitin Verma, and Satish Waghmare. "Magnitude of Peripheral Neuropathy in Cirrhosis of Liver Patients from Central Rural India." Annals of Indian Academy of Neurology. 2014;17(4):409–15. Available: <https://doi.org/10.4103/0972-2327.144012>.
  15. Mittal R, Chowdhary DS. A Pilot Study of the Normal Measurements of the Liver and Spleen by Ultrasonography in the Rajasthani Population. Journal of Clinical and Diagnostic Research. 2010;4(4):2733–36.

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