



## BUDD CHIARI SYNDROME-REVIEW ARTICLE

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### ABSTRACT

Budd Chiari syndrome is a condition caused by occlusion of hepatic veins that drain the liver. Is a heterogeneous group of disorders the clinical variant of Budd-Chiari syndrome-acute and sub acute chronic fulminant the cause primary Budd-Chiari syndrome (75%) secondary Budd-Chiari syndrome (25%) diagnosis laboratory studies imaging studies imaging studies a minority of patient can be treated medically with sodium restriction, diuretics to control ascites pharmacologic therapy procedure and surgery in general 2/3 of patient with Budd-Chiari are alive

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### INTRODUCTION

Budd Chiari Syndrome Is A Heterogenous Group of Disorders characterised by hepatic venous outflow obstruction at the level of the hepatic venules, the large hepatic veins, the inferior vena cava, or the right atrium. Hepatic veno-occlusion disease refers to obstruction of hepatic venous outflow at level of the central or sub lobular hepatic veins, or both

#### Signs and symptoms

- Physical examination will reveal the following
- Jaundice
- Ascites
- Hepatomegaly
- Splenomegaly
- Ankle edema
- Stasis ulcerations
- Prominence of collateral veins

#### The clinical variant of budd-chiari syndrome

**Acute and sub acute-** characterized by rapid development of abdominal pain, ascites (which can cause abdominal distention) hepatomegaly, jaundice, renal failure

**Chronic form-** most common presentation; patient present with progressive ascites; jaundice is absent; approximately 50% of patient also have renal impairment

**Fulminant form-** uncommon presentation fulminant or subfulminant hepatic failure is present, along with ascites, tender hepatomegaly, jaundice and renal failure

### Etiology

The cause can be found in more than 80% of the patient

#### Primary Budd-Chiari Syndrome (75%)

- Thrombosis of hepatic vein
- Hepatic vein thrombosis is associated with the following in decreasing order of frequency
- Polycythemiavera
- Pregnancy
- Postpartum state
- Use of oral contraceptives
- Paroxysmal nocturnal hemoglobinuria
- Hepatocellular carcinoma
- Lupus anticoagulants

#### Secondary Budd-Chiari Syndrome (25%)

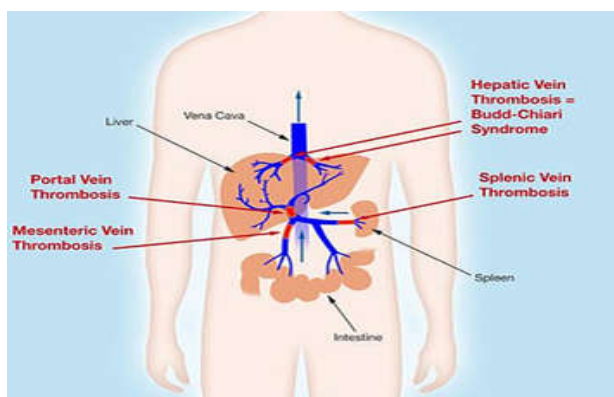
Compression of the hepatic vein by an outside structure (e.g a tumor) Budd-chiari syndrome is also seen in infection such as tuberculosis, congenital venous webs and occasionally in inferior vena caval stenosis

### Pathophysiology

Any obstruction of the venous vasculature of the liver is referred to as budd-chiari syndrome, from the venules to the right atrium. This lead to increased portal pressure causes increased filtration of vascular fluid with formation of ascites in the abdomen and collateral venous flow through alternative veins leading to esophageal, gastric and rectal varices. Obstruction also cause centrilobular necrosis and peripheral lobule fatty changes due to ischemia. If the condition persists nutmeg liver will develop.

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Renal failure may occur, due subsequent activation of rennin angiotensin pathways and excess sodium retention

### Diagnosis

#### Laboratory studies

- Examination of ascetic fluid provide useful clues to thwe diagnosis odbuddchiari syndrome,
- Patient usually have high protein concentrations (>2g/dl); this may not be present in person with acute form of the disease
- The white blood cell (WBC) count is usually less than 500/ml
- The serum ascites- albumijn gradient is usually less than 1.1(except in the acute forms of budd-chiari syndrome)

#### Imaging Studies

- ultrasonography
- computed tomography
- magnetic resonance imaging (MRI)
- Venography

#### Biopsy

Pathological finding in liver biopsy are High grade venous congestion and centrilobular liver cell atrophy

Thrombin within the terminal hepatic venules

#### Management

A minority of patient can be treated medically with sodium restriction, Diuretics to control ascites

#### Pharmacologic therapy

- Anticoagulants
- Thrombolytics
- Diuretics

#### Procedure and surgery

- Balloon angioplasty
- Localized thrombolysis
- Placement of stent or transjuglar intrahepatic portacaval shunt (TIPS)
- Variceal treatment
- Paracentesis
- Portal decompression
- Percutaneoustranshepatic balloon angioplasty (PTBA)
- Liver transplantation

#### Prognosis

When the vein remain completely blocked, most people, if untreated, die of liver failure within 3 years. When blockage is incomplete, life expectancy is longer but varies. In general 2/3 of patient with budd-Chiari are alive at 10 years important negative prognostic indicators include ascites, encephalopathy, elevated child-pugh scores, elevated prothrombin time and altered serum level of various substance (sodium, creatinine, albumin, and bilirubin). Survival is also highly dependent on the underlying cause of the budd-Chiari syndrome.

#### CONCLUSION

To conclude Budd chiari syndrome is a condition caused by occlusion of hepatic veins that drain the liver. It present with classical triad of abdominal pain, ascites and liver enlargement. The formation of a blood clot within the hepatic veins can lead to budd-chiari syndrome. It occus in 1 out of million individuals. The syndrome can be fulminate acute or symptomatic

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