

# A Budd Chiari Syndrome Case with A Thrombus in A Strategic Place of Inferior Venacava

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**Özet:** *INFERIOR VENA KAVANIN STRATEJİK BİR BÖLGESİNDEKİ TROMBUSE SEKONDER GELİŞEN BUDD-CHIARI'LI BİR OLGUNUN TAKDİMİ*

*Budd-Chiari sendromu genellikle kötü prognozla gittiği bilenen bir hastalıktır. Hastalık hepatik venöz dolaşımında herhangi bir şekilde veya lokalizasyonda engellenme sonucu oluşmaktadır. Myeloproliferatif hastalıklar, Behçet hastalığı, paroksizmal nokturnal hemoglobüri, inferior vena cava (IVC)'nin membranöz obstrüksiyonu sayılabilecek etyolojik sebepler arasındadır. Hastalar genellikle karın ağrısı, asit ve hepatosplenomegali ile başvururlar (9). Genelde tedavide cerrahi ön planda tutulmakla beraber, bazı son çalışmalarda antitrombotikler, antikoagulanlar ve diğer tıbbi tedavilerle hastalara oldukça faydalı olduğu bildirilmektedir (1). Bu hastada ilginç olan inferior vena cavanın tam atriuma dökülmelerden önce bir trombus tarafından tam tıkalı olmasıdır ve beraberinde bütün hepatik ven dallarının ultrason (US) da dilate olduğunu tespitidir.*

**Anahtar kelimeler:** Budd-Chiari sendromu, trombus, inferior vena cava.

A thirty-seven years old man came to us with a right upper quadrant pain for approximately 11 years. This pain had been coming in various times, there had been no association with meals or effort, but sometimes it had been increasing after running. One year ago, Patient applied to another hospital and hospitalized there for 38 days. The patient was referred to our hospital.

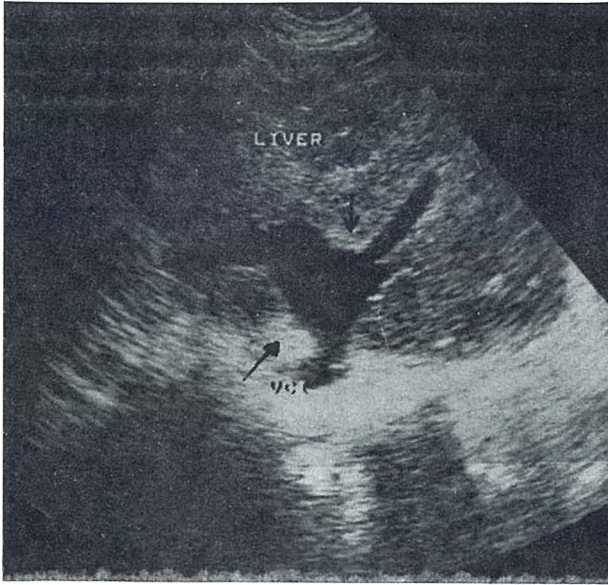
On admission, on physical exam: liver was 6 cm palpable under costal margin at mid clavicular line, its total vertical length was 15 cm. On US, hepatomegaly, left lobe hypertrophy, non homogeneous parenchyma, hepatic venous dilatation in the three main branches were detected (Figure 1 he-

**Summary:** *Budd-Chiari syndrome (BCS) is seen as a disease with a poor prognosis. The syndrome is considered to be the result of any kind of obstruction involving hepatic venous outflow. One can encounter myeloproliferative disorders, Behçet's disease, paroxysmal nocturnal hemoglobinuria, membranous obstruction of inferior vena cava (IVC) among the etiologic factors. The patient usually presents with abdominal pain, ascitis, hepatosplenomegaly (9). The general attitude to these patients in view of treatment is generally surgery like portocaval shunts, but antiagregants, anticoagulants and other medical measurements have been shown to be beneficial in some recent studies (1). The interesting point in this patient is that the cause of the syndrome is a thrombus just at the entry of inferior vena cava to right atrium, and accordingly all hepatic veins were dilated on ultrasonography (US).*

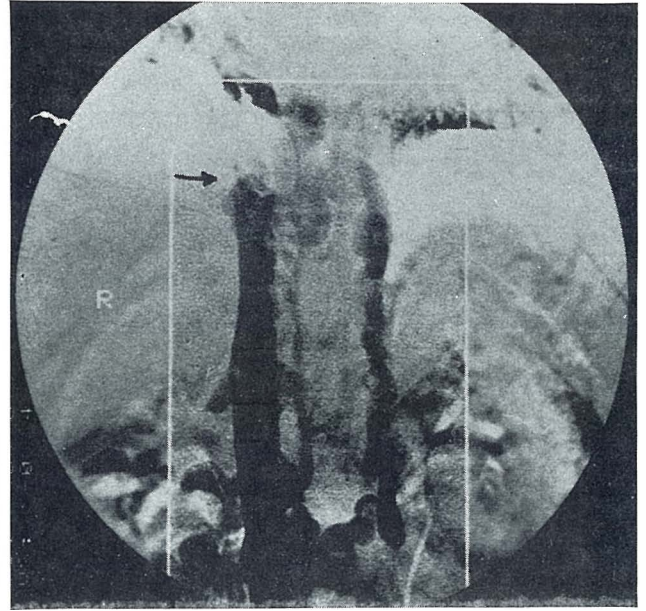
**Key words:** , Budd-chiari syndrome, thrombus, inferior vena cava.

patic venous dilatation in the three main branches). A mild splenomegaly was among the findings on US. Looking at the blood biochemistry; BUN: 31 mg/dl Creatinin : 1.9 mg/dl, Urinalysis: normal, Hb: 15.1 WBC: 6200 Platelet count: 291000. Alkaline Phosphatase: 262 and 289 ALT:45 AST:47 Total protein: 7.9 Albumin: 3.9 Bilirubin:0.3 (indirect) /0.1 (direct) Parasite: negatif Serum iron: 14u g/l Total iron binding capacity: 48 ug/l Transferrin saturation: 29% PTZ: 15, HBs (+), Echocardiography: Normal Peripheral venous pressure : 5.7 cm H<sub>2</sub>O Liver biopsy: Paracymal basic structure was intact. Sinusoidal dilatation, congestion and dilatation in central vein and pericentral fibrosis were present. Iron stainig was negatif. Staining for reticulin showed increased staining.

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**Figure 1:** US shows dilatation of the hepatic veins (arrows) and obstruction of the inferior vena cava at the level of hepatic portion.



**Figure 2:** Inferior Cavography with digital subtraction angiography reveals a complete obstruction of inferior vena cava (arrow).

In inferior vena cavography, through femoral vein reaching appropriate area, we gave contrast material, observed that just after the point where hepatic veins joins IVC, there is a total obstruction (Figure 2; the picture shows the total obstruction at the point just after the hepatic portion of inferior vena). We also saw the dilatation of the hepatic veins in the hepatogram taken at the same session.

At the clinical follow up, although there are literature mentioning about the utility of surgical procedures include balloon angioplasty which was reported to be applied successfully in some clinics together with local thrombolytic therapy and expandable metallic stents (5,6,7). we have preferred to be more conservative, and treated the patient medically. We gave the patient two anti-aggregants, dipyridamol 75 mg tid and acetylsalicylic acid 250 mg each day. We followed the patient for almost two and a half years. At the end of this period, There was not any further enlargement in liver. Left lob hypertrophy, caudate lob hypertrophy, dilatation of three main hepatic veins and their branches were important findings. Almost one and a half year later, some of the lab results were as ALT: 24, AST: 29, ALP: 219, total bilirubin: 1.2, direct bilirubin: 0.4. At last, one month ago these parameters were almost same.

## DISCUSSION

This case is not appropriate for the classic definition of BCS, which is considered to be composed of cases with involvement of hepatic veins. But according to the new definition (2), one can name this case BCS. The new definition is that, a case is named BCS, if there is an obstruction to hepatic venous outflow in any place until it reaches right atrium.

Our case is different from classic BCS cases and among the patients who are seen rarely. With the inferior venocavography we saw that there was an obstruction at a very strategic place. During our research, we couldn't find a causative factor for the formation of thrombus. In Turkey, one should think of Behçet's disease that can present with this clinical symptoms and findings (1,4). But in our patient there was no arthritis, eye involvement, history of oral genital aphthous ulcerations. Also patergy test was negative. Seeing the blood cell parameters we didn't think of a myeloproliferative disorder. Although it was reported in some recent literature that it could be understood whether there was a latent myeloproliferative disease.

The way of doing this is by performing an erythroid colony culture and chromosomal studying. It is reported that growing of erythroid colonies in

the absence of exogen erythropoetin indicates the presence of a latent polycytemia vera (3). Among suspicious causes is paroxysmal noktturnal hemoglobinuria which also could'nt be found in our patient. Its absence was decided after seeing the negativity of both acid ham test and sucrose lysis test. What we saw in inferior venacevography was'nt considered to be a membranous obstruction because that was a total obstruction. But we should'nt be so sure about whether the obstruction was due to a thrombus, or a membrane with around a thrombus. Becuse in a recent study, M. Kage et al examined 17 autopsy cases of BCS with membranous obstruction. At the end of study they stated that although it was generally accepted that membranes were congenital, this didn't explaine the late onset of the disease. They saw there had been thrombus around membranes in 7 of 9 cases. And in some cases they decided that solely a thrombotic process and its sequelas were responsible from the occlusion, but not an indication of congenital malformation was present (8). These patients can be searched for constrictive periaditis and

chronic liver disease for a long time, as in our case (10). Although the possibillity of finding of a thrombus in such a cause and web in IVC, one should do cavografya, especially if there is clinical situation suitable to BCS. As in our case although one encounters that a patient has been HBs Ag positive, got hepatomegaly, mildly increased liver enzymes and bilirubin levels, that's why can attribute this picture to chronic active hepatitis due to hepatitis B virus in the first place. But this case shows us the importance of making a biopsy first of all, even if patient is in a situation as described above.

We want to point out that in this case report, we presented an interesting case with respect to the place of thrombotic occlusion. it is in a very strategic place which was reported rarely. Secondly in patients taking medical therapy, we show that the expectancy of a good survival in a relatively healthy manner is more then previously believed. So we now seriously think of giving chance of medical treatment to such patients more then before.

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