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# Acute ascites as a clinical manifestation of dengue: A case report

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## ABSTRACT

**Rationale:** Dengue is an important tropical disease that can cause acute hemorrhagic fever. Other atypical clinical presentations of dengue also can occur, and acute ascites is one of them.

**Patients' concern:** A 47-year-old male patient was referred to the physician with acute abdominal extension for 2 days. He revealed a history of fatigue and right upper abdominal pain in the past 4 days.

**Diagnosis:** Dengue-induced acute ascites.

**Intervention:** Standard fluid replacement therapy.

**Outcome:** The clinical finding of the patient returned to normal within 5 days.

**Lesson:** Since dengue has been expanding its endemic area at present, an atypical clinical presentation is possible and should not be ignored in the process of diagnosis. In addition, the clinical presentation of acute distention of abdomen with abnormal petechiae is a good diagnostic implication for dengue-induced ascites.

**KEYWORDS:** Dengue; Ascites; Acute; Manifestation

## 1. Introduction

Dengue is an important tropical infection that can result in acute hemorrhagic fever. The classical dengue presentation is acute febrile illness[1]. The patient usually suffers from high fever and hematological dengue triad (hemoconcentration, atypical lymphocytosis, and thrombocytopenia)[1]. The immunopathological process in dengue infection can result in platelet destruction and further induce hemorrhagic complications[2]. With respect to dengue hemorrhagic fever, if proper fluid replacement therapy is not applied in time, the patient might end up with death[1].

Generally, hemorrhagic complications of dengue can be seen in severe cases[2]. The patient with dengue hemorrhagic fever is usually in a terrible situation and requires good fluid replacement therapy[2]. However, the atypical clinical presentation of dengue is

possible and becomes an interesting issue in acute medicine. An abdominal presentation in dengue is possible but little mentioned in the literature. In a recent report from India by Pothapregada *et al.*, up to 31 % of dengue patients had abdominal pain[3]. In another report from India, Jhamb *et al.* found that 51.35 % of dengue patients had abdominal pain[4]. The possible acute dengue-related abdominal diseases include hemoperitoneum[5], bowel perforation[6], and pancreatitis[7]. Here, the authors reported a case of dengue presented with the first complaint of acute abdominal extension.

## 2. Case report

This study was approved by the Ethical Committee of Medical Academic Center, and informed consent was obtained from the patient. A 47-year-old male patient was presented to the physician with acute abdominal extension for 2 d. He revealed a history of fatigue and right upper abdominal pain in the past 4 d. The clinical examination showed the distended abdomen with the petechiae lesion (Figure 1).

The patient noted that the skin lesion occurred for 2 d. On the third day, the acute abdominal extension occurred. The patient received the laboratory examination and the complete blood count showed severe thrombocytopenia (platelet=35 000/ $\mu$ L; normal range 150 000-400 000/ $\mu$ L) and markedly increased serum glutamic

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**Figure 1.** Clinical examination shows distended abdomen with petichiae.

oxaloacetic transaminase (680 U/L; normal range 5-40 U/L) and serum glutamate-pyruvate transaminase (850 U/L; normal range 5-40 U/L). The additional serological test showed positive dengue non-structural 1 antigen test. Thus, the diagnosis was decisively made for dengue infection and dengue ascites as the complication. This patient received standard fluid replacement therapy and was hospitalized. His clinical finding returned to normal within 5 d.

### 3. Discussion

Ascites is an important clinical problem in medicine. Several medical conditions can induce this abdominal presentation. The common underlying conditions causing ascites include cirrhosis and liver failure. In children, ascites might happen due to the liver, cardiac or renal diseases. Besides, some acute diseases can cause ascites, such as acute pancreatitis. In the current report, the authors presented and discussed a case of acute ascites due to dengue. Indeed, ascites is a possible complication of dengue, and it is usually seen in severe dengue cases[8]. During clinical course of dengue, occurrence of ascites is common, and it is usually a predictor of fatal dengue[9]. In an Indian study, ascites is more common in dengue hemorrhagic fever than dengue fever[10].

The most common first complaint of dengue is fever[1]. However, the present case firstly presented with acute ascites complaints. The patient might have a fever but he did not concern about the problem. The first problem that leads the patient to the physician is abdominal discomfort. The patient with dengue-induced ascites usually has a severe clinical course. The patient might also have other additional serious atypical dengue complications such as pulmonary edema. In these cases, good clinical management of fluid replacement therapy is required.

Since the endemic area of dengue is expanding constantly, the atypical clinical presentation might be observed frequently. The

clinical picture of acute distention of the abdomen with abnormal petechiae is a good clue for diagnosis of dengue ascites in the present case. Dengue-induced ascites can result in acute abdominal extension. The practitioner has to recognize this possible acute complication of dengue.

### Conflict of interest statement

The authors report no conflict of interest.

### Authors' contributions

J.B.: Equal contribution; drafting of article, writing, revision, and approve final article; W.V.: Equal contribution; ideas, supervision, revision and approve the final article.

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