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## Spurious Hemoptysis in Dengue Fever

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### Abstract

Dengue fever (DF) is a rapidly spreading mosquito-borne viral disease, which can present with haemorrhagic manifestations. This is case of a young male who presented with fever and hemoptysis. He was diagnosed to have DF with post nasal bleeding (spurious hemoptysis). DF presenting with unprovoked post nasal bleeding is an uncommon scenario.

**Keywords:** Dengue fever, thrombocytopenia, post nasal bleed, hemoptysis, spurious

### Case presentation

An adolescent boy presented with 4 days history of high grade fever and myalgia, and 8 to 10 episodes of hemoptysis since 1 day. He did not have any comorbidity and was not on any regular medications.

On presentation, he was conscious, oriented and febrile (102°F). His other vitals and systemic examinations were normal. His blood investigations showed hemoconcentration with Hb of 18.5 g/dL and PCV 51%, leucopenia of 3,200/cu mm and thrombocytopenia of 22,000/cu mm. His liver enzymes were elevated i.e. SGOT 124 U/L and SGPT 304 U/L, but renal functions were normal. His prothrombin time and activated thromboplastin time were normal. Dengue NS1 antigen was positive. His chest X-Ray and ECG were normal.

He was started on intravenous fluids. In view of post nasal bleeding, he was given platelet transfusions (2 units) and intravenous tranexamic acid (500 mg q8h). By day 2 of admission, he became afebrile. His platelet counts showed an increase to 44,000/cumm. His post nasal bleeding stopped on day 3 of admission, and repeat endoscopy was normal with no active bleeding (**Figure 1**). Tranexamic acid was stopped. His serial platelet count showed a rising trend; and was discharged after 3 days with a normal complete blood count. On review after

1 week, he was asymptomatic with normal complete blood count and liver function test.



**Figure 1:** Nasopharynx with no active bleeding

## Discussion

The Dengue virus is a single stranded RNA virus comprising of five serotypes (DENV 1-5). The primary infection provides lifelong immunity against that infecting serotype, however there is no long-term cross protective immunity against other serotypes [1].

Dengue virus infection can be asymptomatic and go unrecognised. It may also present as an undifferentiated fever, indistinguishable from other viral fevers. The WHO defines DF as an acute febrile illness of 2-7 days duration with two or more of the following: headache, retro-orbital pain, myalgia/arthralgia, rash, haemorrhagic manifestation (petechiae, positive tourniquet test), leucopenia. The more severe forms can present as hemorrhagic and shock syndrome. Dehydration, bradycardia, hypotension, haemorrhage, seizures, encephalitis and death are the more serious complications [2].

There are three phases in DF. The first phase is characterized by fever, headache, myalgia and leucopenia, and is called the febrile phase. It lasts for 2-7 days. The second phase is associated with thrombocytopenia, increase in haematocrit level and increase in capillary permeability. This may be accompanied by pleural effusion and ascites. Severe plasma leakage can result in shock. Organ involvement in the form of myocarditis, hepatitis, encephalitis or severe bleeding can also occur. This phase is called the critical phase, and last for 24-48 hours. This is followed by the recovery phase where there is gradual resorption of extracellular compartment fluid. The blood parameters like platelet count and haematocrit

show a normalising trend [2].

Though there have been several reports of DF with hemorrhagic manifestations and other complications [3-5], unprovoked post nasal bleeding is an uncommon scenario; and to the best of knowledge, has not been reported yet.

### **Conclusion**

DF can present with hemorrhagic manifestations. Our patient presented with spurious hemoptysis due to unprovoked post nasal bleeding, which in DF is an uncommon scenario.

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