

Case Report

Dengue presenting as gastric perforation: first case reported till date

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ABSTRACT

Gastrointestinal perforation is one of the common complications of various illness that is associated with high mortality and morbidity. The common sites of perforation in GIT (gastrointestinal tract) are stomach, duodenum, ileum and colon, but in dengue perforation in any of the above site is rare. Here we report an interesting case of gastric perforation that occurred in a young male patient post dengue fever. To our knowledge, this is the first such case of gastric perforation that occurred in our patient with dengue that we are reporting in the literature.

Keywords: Dengue, Gastric perforation, Perforation, Gas under diaphragm

INTRODUCTION

Dengue is an acute infectious disease caused by an arbovirus which is transmitted to the man by infected mosquito, *Aedes aegypti*, being the most common vector.^{1,2}

Factor responsible for spread include explosive population growth, uncontrolled construction activity, failing public health systems and increased travel across various regions. Almost every system of the human body is affected by dengue infection, hence the disease is notorious for its deceptive presentation. Management of this condition is predominantly the domain of the physician however abdominal manifestations of this disease present a dilemma to the gastroenterologist including the general surgeon.³ Here we present a case of dengue presenting as gastric perforation (Table 1).

Table 1: Summary of gastrointestinal perforation associated with dengue.

Year (reference)	Reported by	Site of perforation
2002 (7)	Alam SM, Bhuiya MMR, Islam A,	Unknown

	Paul S.	
2014 (8)	Amit kumar C. Jain*, Viswanath S	Jejunum
2015	Present case	Stomach

CASE REPORT

A 17 year old young male came to the emergency department with chief complaints of fever with chills since 2 days and generalized pain in abdomen and vomiting since 1 day. Patient was apparently alright 2 days back when he had an episode of fever which was high grade and was associated with chill for which he consulted a local doctor who prescribed him empirical malaria medication. After 1 day the patient came to our emergency with history of pain in abdomen which was associated with bilious vomiting and obstipation. On general examination blood pressure was 80/60 mm of Hg, pulse -120/minute, respiratory rate was 30/minute. On per abdomen examination it was distended, generalized tenderness with generalized voluntary guarding was present. After stabilising the patient, he was taken for chest xray, xray abdomen erect and ultrasonography abdomen pelvis and all blood investigation was send along with malarial parasite, malarial antigen test, widal

and dengue. X-ray abdomen showed bilateral free gas under diaphragm. In blood investigation complete blood count show haemoglobin -15, total blood count -9000, platelet -101, dengue NS1 was positive. Patient was taken up for emergency exploratory laparotomy. Intraoperative finding include pus and bilious fluid in abdomen with pus flakes and gastric perforation (Figure 1).

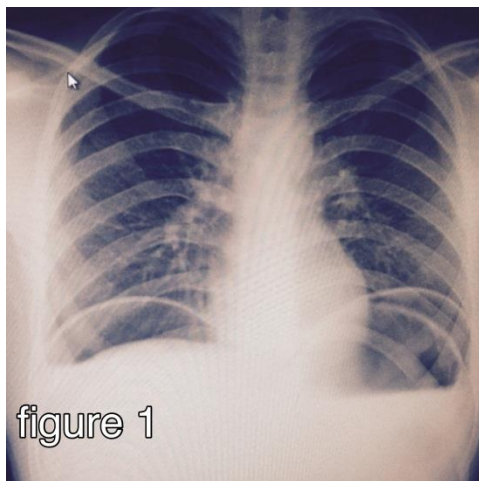


Figure 1: X-ray chest showing bilateral free gas under diaphragm.



Figure 2: Intra Op image showing gastric perforation.

DISCUSSION

In India, epidemics of dengue are becoming more frequent.⁴ In fact, dengue fever and dengue hemorrhagic fever are increasingly important public health problems in both tropical and subtropical region.¹ Around 2.5 billion people live in areas where dengue is endemic.¹ In 1998, 1.2 million cases of dengue were reported by WHO including 3442 deaths.¹ If untreated, mortality from complication of dengue fever is as high as 20%.⁴ The severity of dengue is classified as mild (grade I and II) or severe (grade III and IV), the presence of shock being the main difference. The gastrointestinal manifestations of dengue are not rare and should not be overlooked.⁵ These manifestations are increasingly being identified and reported such as hepatitis,⁶ Acalculous cholecystitis, pancreatitis,^{2,6} etc.

In a series of hollow viscous perforation by Alam et al.,⁷ it was found that there were 2 cases of intestinal perforation due to dengue hemorrhagic shock syndrome. But they did not mention the site and number of perforation. Also there is a case reported with multiple small and large perforations in the mid jejunum at mesenteric side along with necrosis of the part of the mesenteric side near that segment.⁸ Although the exact mechanism of this is not clear, there is evidence of intestinal mucosal injury occurring in dengue infection.⁹

CONCLUSION

Gastrointestinal manifestations of dengue are increasingly being recognized with increased with frequency of dengue. Gastric perforation in dengue have never been reported till date and this is first such case that is being reported.

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