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CASE STUDY

MENORRHAGIA IN DENGUE; A RARE SOLE PRESENTATION

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ABSTRACT

Dengue fever is a major public health problem in tropical countries. Clinical manifestations range from a nonspecific viral syndrome to a severe fatal hemorrhagic disease. Menorrhagia as the sole presentation in dengue among the women is very rare. We report two adult women who presented with high fever, generalized bodyache with severe menstrual bleeding without any history of amenorrhea or any previous menstrual abnormality. Dengue was suspected because of thrombocytopenia and epidemic of dengue in West Bengal. In dengue epidemic area, dengue should be considered as a probable eitiological causes of menorrhagia. We have confirmed these case by NS1Ag, Dengue IgM antibody, IgG antibody and Low platelate count in their blood.

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INTRODUCTION

Dengue is a mosquito borne human disease. worldwide infected about 3.2 million/year. (WHO 2015) Half of the world population is now at risk. (WHO 2016) Dengue fever is a major public health problem in tropical countries. Clinical manifestations range from a nonspecific viral syndrome to a severe fatal hemorrhagic disease. Menorrhagia as the sole presentation in women is rare. (http://www.ijgo.org/article/S0020-7292(11)00078-6/abstract) Dengue is a well-known tropical viral infection that can result in bleeding abnormality due to severe thrombocytopenia. However, a rare presentation, the gynecological bleeding is very rare. In sexually active women, dengue can co-present with menstruation and this can lead to severe dysmenorrhea and excessive menstrual bleeding. (http://link.springer.com/article/10.1007/s00404-012-2657-z) This case can be a good case study that dengue can present with uncommon bleeding and it can be overlooked. Indeed, dengue infection is already mentioned as a cause of menorrhagia in some reports. (http://www.atmph.org/article.asp?issn=1755) Usualy, the gynecologist missed the dengue due to the co-presentation with menstruation. In dengue endemic area, physicians should not overlook bleeding from other less common sites such as genitourinary tract. We describe two cases of memorrhagia caused by dengue infection that occurred in this rainy season (2016) in the city of Kolkata, West Bengal, India; during dengue outbreak in West Bengal. (Anandobazar Patrika, 2016)

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Case 1

A 35-year women admitted in Infectious Disease & Beliaghata General Hospital, Kolkata -10; West Bengal,India with complained of high grade fever (103degree F), generalized bodyache with heavy menstruation for last 2 day. Her initial blood report were Hb-12.8gm/dl, Wbc-3500, Platelate-90,000/cmm. Others reports eg. MP, Dual antigen, metabolic panel, renal parameter, PT& APTT all were normal. USG of lower abdomen did not give any clue. Due to thrombocytopenia and epidemic of dengue we sent NS1Ag, Dengue IgM antibody on 4th day of fever and all were positive (by ELLISA). And on 4th day her platelate was 30,000/cmm and Hb% fall to 8.9gm/dl. We treated her single donor platelate transfusion, inj Tanexamic acid, iv Fluid and Paracetamol. Within two days of treatment her bleeding ceased and platelate count increased to 80,000/cmm. Careful history taking revealed menstruation started on the first of fever with regular menstruation.

Case 2

A 16yr, old girl admitted to same hospital with fever with heavy menstrual bleeding for last 3days. Initial workup of fevereg. MP, Dual antigen, Complete blood count and biochemical analysis were non-contributary. Platelate count was 80,000/cmm. USG of abdomen was normal. No history of

amenorrhagia or any previous menstrual abnormality. Coagulation profile was nomal except low platelate.All these investigation were done before hospitalization. Due to epidemic area of dengue and low platelate we sent NS1Ag on 4th day of fever and it was negative and made the case difficult. But we sent second sample for dengue IgM antibody and on 5th day of fever and it was positive. We treated her with iv fluid, inj Tanexamic acid and Paracetamol. She did not require platelate transfusion as her lowest platelate count was more than 40,000/cmm and did not much fall of Hb% and patient was hemodynamically stable through out the hospital course and discharged her on 7th day of fever. Daily monitoring of platelate was most important tool in this case.

DISCUSSION

Our case were reported during this rainy season; during the outbreak of dengue in West Bengal in 2016. (Anandobazar Patrika, 2016) In both cases there was no history petechiae, purpura, hematuria, GI bleeding, Epistaxis or gum bleeding which are the common form of bleeding manifestation of dengue hemorrhagic fever and associated with low platelate count. But in these cases the platelate count were 90,000/cmm and 80,000/cmm. At that level of platelate count bleeding manifestation usually not seen. Other complication of dengue eg. Capillary leak syndrome is seen when platelate count are fall around 50,000 to 40,000/cmm. (Tapan Biswas, 2016) Both the patient mentioned that they were in her first day of their menstruation cycle. They passed more than 20 soaked sanitation pads and felt very fatigued. The severe menstruation as a presentation of dengue is uncommon and can be problematic. The present case study is not the case with excessive menstruation as presentation of dengue, but it is a very rare and problematic case wherein the patient developed menstruation during the course of severe thrombocytopenia due to dengue. In these case low platelate count associated fever was the indication of doing dengue test. So, platelate count is an invaluable diagnostic screening tool in dengue. (Goswami *et al*., 2012), Regular monitoring of "Platelate count" may be a biomarker of dengue fever. In this case first patient required platelate transfution as severe blood loss; Hb fall from 12.8 to 8.9gm/dl. But in second patient platelate transfusion is not required as no significant fall of Hb%. In first case, rate of platelate destruction was massive eg around 66.66%. So, rate of platelate destruction is another indication of platelate transfusion and clinically significant. Usually, 90,000/cmm platelate count does not bleed from any site but in these cases dengue only intensified the ongoing bleeding processes. Platelate count reduction is not only causes of bleeding manifestation in dengue but other causes of bleeding may be consideded. In these case, we did not considered other causes of fever associated with thrombocytopenia like chikunguniya, mumps, Zika virus. Peripheral blood smear rule out the lymphoma and leukemia. Both p. vivax and p. falciparum may causes of thrombocytopenia; rule out by peripheral smear and dual antigen test. Septic abortion is rule out by USG of whole abdomen. In first case, massive fall of platelate (30,000/cmm) on 4th day of fever and both NS1Ag and dengue IgM were positive.It is probably due to secondary dengue. In second case, NS1Ag was negative because its sensitivity is 89%. (Araújo *et al*., 2011) And it was confirmed by dengue IgM antibody. Platelet destruction usually started from the 4th or 5th day of dengue fever & upto 14th day. A large Brazilians study included 543 dengue patients show thrombocytopenia started from 3rd day of fever in uncomplicate cases, while thrombocytopenia started from 1st or 2nd day in severe dengue. (Oliveira *et al*., 2009) In both groups the lowest platelet count occurred around the seventh day of fever. It is generally recommended to use PCR or NS1 antigen detection in patients with fever for fewer than five days, and MAC ELISA in patients with fever for more than five days (Varatharaj, 2010). Dussart *et al*. have achieved a sensitivity of 89% with an assay for NS1 antigen (Araújo *et al*., 2011). This test is rapid, reliable and less costly than PCR. When used in combination with IgM, the detection rate rose to 92.3% (Dussart *et al*., 2006). A rising titre in two serum samples can confirm acute infection. *Singh et al*. reported the sensitivity of MAC-ELISA at 69%, rising to 90% with repeat convalescent testing. Specificity was 80% (Alexander *et al*., 2011)

Conclusion

Our report demonstrate that menorrhagia with fever can be dengue infection. Regular monitoring of "Platelate count" is the biomarker of dengue infection. In dengue epidemic area, dengue infection should be considered as probable etiology of menorrhagia. Fever with low platelate count may be dengue infection unless proved otherwise in tropic. Rate of platelate destruction is also significant.

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Consent: Informed consent is taken from each patient.

Conflict of Interest: No conflict of interest is decleared.

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