

Menorrhagia: Dengue a Rare Cause

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Abstract: Dengue fever is a major public health problem in topical countries. Clinical manifestations range from non-specific viral syndrome to a severe and fatal hemorrhagic disease. A 41-year-old multiparous woman presented to us following 6 days of heavy menstrual bleed. She had a history of fever with headache & arthralgia for 5 days. Her menstrual cycles were regular. On examination she had moderate pallor. Her UPT was negative and gynecological examination was normal. In view of the regional outbreak of dengue fever, serology tests were carried out. Immunochromatography was +ve for IgM. Lab evaluation revealed a Hb of 9g/dl & a platelet count of 70, 000/mm³. The woman was given nonspecific hemostatic agents after which her platelet count rose. Her condition improved and she had the next 3 normal cycles of menses. Menorrhagia as a sole presentation in dengue is rare. In dengue epidemic area, dengue should be considered as a probable etiological cause of menorrhagia.

Keywords: Menorrhagia, Dengue

1. Case Report

A 41-year-old multiparous woman sought second opinion at Government Medical College and Hospital, Chandigarh, India following generalized weakness after first episode of heavy menstrual bleed since 6 days, and moderate pallor advocated dilatation and curettage outside. There was no history of preceding amenorrhea and pregnancy test was negative. Her previous menstrual cycles were regular, painless, and with average flow. On general physical examination no abnormality inclusive of any findings of chronic anemia was detected except moderate pallor. On speculum examination there was minimal bleeding and bimanual gynecological examination was also normal. On further details she gave history of fever lasting for 5 days with headache and arthralgia that preceded her menstrual cycle with menorrhagia. With a previous case of menorrhagia with moderate free fluid reported earlier and in view of regional outbreak of dengue fever, serology tests were carried out.

Immuno-chromatography was positive for immunoglobulin M. Lab evaluation revealed a hemoglobin of 9 g/dl, platelet count of 70, 000 per mm, WBC count of 5, 000 and a normal differential count. Coagulation profile was normal.

She responded well to non-specific hemostatic agents and on follow up her platelet count showed a rising trend to 1,

60, 000. After this episode, her condition improved and on her follow up she resumed her normal cycles.

Dengue Fever and impact:

Dengue fever with regional and seasonal variations is not a uncommon public health problem in tropical countries. Influenced by rainfall, temperature and unplanned rapid urbanization it is widespread throughout the tropics. Female mosquitoes of *Aedes aegypti* species that also transmit chikungunya, yellow fever and Zika infection are also responsible for spreading serotypes of the virus that cause 4 distinct but closely related dengue (DEN-1, DEN-2, DEN-3 and DEN-4). The infection by one species provides lifelong immunity only against that particular serotype with only partial and temporary cross-immunity to the other serotypes after recovery. Subsequent infections by other serotypes increase the risk of developing severe dengue.

The incidence of dengue has grown dramatically around the world in recent decades. The actual numbers of dengue cases are underreported, and many cases are misclassified. Recent estimate indicates 390 million dengue infections per year (95% credible interval 284-528 million), of which 96 million (67-136 million) manifest clinically (with any severity of disease).¹ Another study, of the prevalence of dengue, estimates that 3.9 billion people, in 128 countries, are at risk of infection with dengue viruses.²

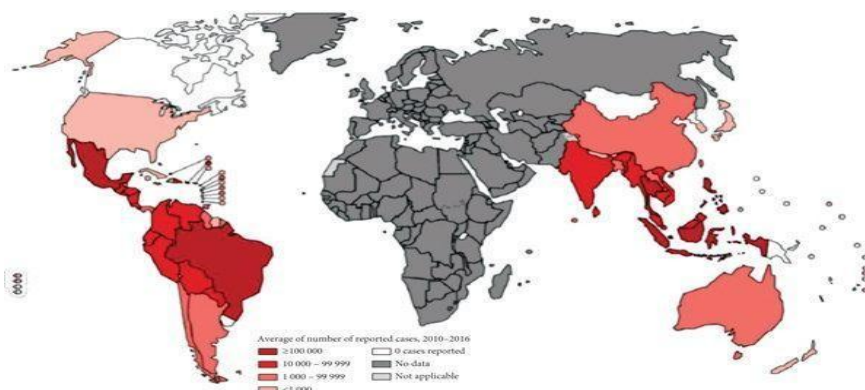


Figure 1: Worldwide distribution of Dengue

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Transmission:

With a incubation period for 4-10 days the infected mosquito can transmit the virus for the rest of its life. Infected symptomatic or asymptomatic humans are the main carriers and multipliers of the virus, serving as a source of the virus for uninfected mosquitoes. Patients who are already infected with the dengue virus can transmit the infection (for 4-5 days; maximum 12) via *Aedes* mosquitoes after their first symptoms appear. The *Aedes aegypti* mosquito lives in urban habitats and breeds mostly in man-made containers. Unlike other mosquitoes *Ae. aegypti* is a day-time feeder; its peak biting periods are early in the morning and in the evening before dusk.

Signs and symptoms for CLINICAL Suspicion:

- A high fever accompanied by 2 of the following symptoms: severe headache, pain behind the eyes, muscle and joint pains, nausea, vomiting, swollen glands or rash.
- After the bite from an infected mosquito and an incubation period of 4-10 days, symptoms usually last for 2-7 days,
- Severe dengue may cause potentially deadly complications due to plasma leakage, fluid

accumulation, respiratory distress, severe bleeding, or organ impairment.

- Warning signs occur 3-7 days after the first symptoms in conjunction with a decrease in temperature (below 38°C/100°F) and include: severe abdominal pain, persistent vomiting, rapid breathing, bleeding gums, fatigue, restlessness and blood in vomit.
- The next 24-48 hours of the critical stage can be lethal; proper medical care is needed to avoid complications and risk of death.
- Clinical manifestations range from non-specific viral syndrome to a severe and fatal hemorrhagic disease. Menorrhagia as a sole presentation in women is rare.³
- However, it is a possibility if the period of lowered platelet counts coincides with the duration of menstruation. The bleeding tendency too is expected to compliment the severity of the disease.
- Bleeding from other sites would help diagnosis. However, if the bleeding surface is limited to endometrium the suspicion may not be immediately apparent as in our case. Further damage with dilatation and curettage could be catastrophic. Luckily our patient had relatively fewer falls in platelets and responded well to hemostatic agents without further intervention.

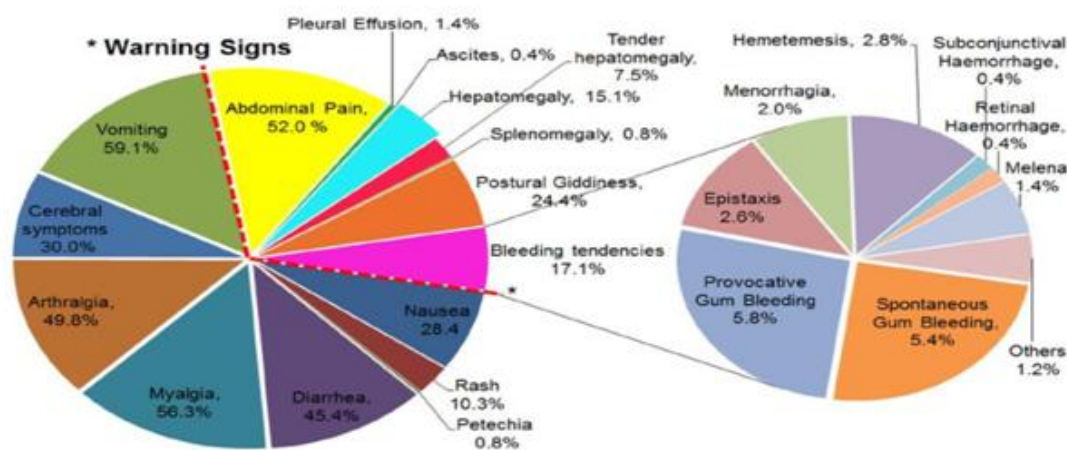


Figure 2: Signs and symptoms of Dengue

2. Conclusion

For dengue fever related thrombocytopenia patients are kept under surveillance and guided on prevention from trauma. Any emergency surgical procedure would mandatorily require due rectification of platelet count and needful preparation. However, co-incident menstrual cycle with physiological trauma of endometrium may cause excessive bleeding propionate to fall in platelets counts but may go unnoticed. Uterine bleeding though reported as associated with DEN-3 and DEN-4 infection, as a sole presentation of menorrhagia is rare and limited to case reports. However, during dengue epidemic for an episode of menorrhagia being conscious of this entity will help raise a suspicion and a careful history may help clinch diagnosis as in our case.

References

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2. Brady OJ, Gething PW, Bhatt S, Messina JP, Brownstein JS, Hoen AG et al. Refining the global spatial limits of dengue virus transmission by evidence-based consensus. *PLoS Negl Trop Dis*.2012; 6: e1760
3. Clinical and Immunological Markers of Dengue Progression in a Study Cohort from a Hyperendemic Area in Malaysia-Scientific Figure on ResearchGate. (Figure 1)