VOLUME - 11, ISSUE - 10, OCTOBER - 2022 • PRINT ISSN No. 2277 - 8160 • DOI : 10.36106/gjra

Original Research Paper

General Medicine

A CASE OF PLASMODIUM VIVAX MALARIA COMPLICATED WITH MULTI-ORGAN DYSFUNCTION SYNDROME: ACUTE KIDNEY INJURY, ACUTE LIVER INJURY, ACUTE RESPIRATORY DISTRESS SYNDROME.

Dr. Pradeep K. Dudhrejia — M.D. Medicine and superintendent at general hospital, Morbi

Dr. Divyesh D. Sherasiya — M.D. Medicine at general hospital, Morbi

KEYWORDS : Complicated malaria, Plasmodium vivax, severe manifestations, AKI(acute kidney injury), ALI(acute liver injury), ARDS(acute respiratory distress syndrome).

INTRODUCTION :

Malaria is a vector-borne disease that is endemic in 91 countries. South East Asia is the second most affected region in the world, with India carrying the highest burden of the disease. Four species of Plasmodium are known to cause malaria in humans. Plasmodium vivax, plasmodium falciparum, plasmodium ovale and plasmodium malariae. Plasmodium vivax and Plasmodium falciparum are the most common species found in India, but Plasmodium malaria have also been reported. Severe complications of malaria have been more commonly seen in Plasmodium falciparum infections, and those caused by P. vivax have been considered benign. However, the literature has alarming reports of complicated malaria seen in vivax infections in recent times. This article report such case of P.vivax infection with severe manifestations of malaria such as are found in P. falciparum. This recent evidence indicates that it is important to suspect complicated malaria in P.vivax infection and initiate the appropriate treatment as early as possible to avoid morbidity and mortality.

Case Report :

A 32 year old male patient with complain of high grade fever with chills and rigors for 6days, yellowish discolouration of urine and sclera for 2days, decreased urine output for 2days, difficulty in breathing for 1day. Patient was admitted to icu ward in General hospital morbi on 30th sept 2022. On admission vital, Temp was 102.5 degree celsius, pulse rate was 118/min, BP was 88/60 mmhg, oxygen saturation was 70%on room air. On examination, RS- both side air entry present with BL crepitations present, CVS & CNS examination was normal. On investigation, HB-8.7, WBC-5600, platelet count-30000, smear was positive for plasmodium vivax ring and trophozoite form, mp by card was positive for p.vivax, dengue ns-1 & Igm was negative, serum creatinine was 2.6, serum urea was 129, serum total billirubin was 10.9(direct 5.4, indirect-5.5), SGPT-780, SGOT-890, ALP- 72, LDH-1240, serum sodium-139, serum pottasium-4.7. Patient was treated with Chloroquine, primaquine, Inj artesunate, IV fluid, inotropic support, o2 and NIV support for 7days and discharged with normal hemodynamic condition.

DISCUSSION:

Infection with malaria in India is very high and causes significant morbidity and mortality. P. vivax and P. falciparum are the commonly found species in India though there are very few reported cases of Plasmodium malariae infection. Of all the species of Plasmodium causing infection in humans, P.vivax is the most widespread in the world. Central and South-East Asia, the Horn of Africa and Latin America are the most commonly reported places with P. vivax infection. It causes significant morbidity and mortality among the people except in African populations who are mostly Duffy negative, which makes them less susceptible to malarial infection. Although often regarded as a benign tertian infection, the alarming evidence in the literature indicates that the morbidity and mortality of P. vivax infection have been underestimated, partly because of the significance given to falciparum as the more dangerous species. This diverts attention from vivax. The severe manifestations with P.vivax malaria are hepatic dysfunction, renal dysfunction, severe anemia, ARDS, multiple organ involvement, and cerebral malaria. The exact pathogenesis, parasite host interactions, and reasons for multi-organ dysfunction due to P.vivax is unclear. Here, we report a case of vivax malaria, who was previously healthy without any prior confirmed malarial illness, but had severe manifestations similar to infection with falciparum such as extreme weakness, thrombocytopenia, hypoglycaemia, liver dysfunction, shock, and renal dysfunction. There were no associated co-morbidities in this patient. There was no evidence of mixed infection. Only P.vivax species was identified by peripheral smear. This article points out that severe complications of malaria are currently often seen even in P.vivax infection as what found in falciparum infection. The incidence of complicated vivax infection is rising.

CONCLUSION:

This article highlights the fact that severe manifestations of malaria are commonly seen nowadays in patients infected with P.vivax as it used to be with falciparum infection. Cerebral malaria and severe acidosis was not present in this case. The common complications encountered are liver dysfunction, renal dysfunction, ARDS, thrombocytopenia, hypoglycaemia, and shock. With the alarming evidence in literature, it is clear that complicated vivax malarial infection may also be very easily encountered, but often under-diagnosed. Early recognition and prompt treatment can significantly reduce morbidity and mortality.

REFERENCES

1. Harrison's principles of internal medicine, 21st edition
2. API textbook of medicine, 11th edition
3. Mansion's tropical disease, 22nd edition
4. Infectious disease book by Jonathan cohen
5. Principles and Practice of Infectious Diseases, 8th Edition