

## LETTER

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# Need for PCR Analysis in Assessing Severe Malaria Infections with *Plasmodium vivax*

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Dear Sir,

Even though *Plasmodium vivax* is highly prevalent in India, the studies are limited not only due to its benign nature but also because of the magnitude of severity caused by *P. falciparum* malaria. In a recent interesting case report published in this journal it has been reported that this is the first reported case of *vivax* malaria associated with acute pancreatitis, which resulted in mortality [1]. In this case report, the diagnosis has been made on the basis of traditional smear microscopy and malaria rapid diagnostic test. However, we consider that, the patients' blood could have been subjected to polymerase chain reaction (PCR) analysis to confirm the *P. vivax* mono-infection. The 18S rRNA PCR diagnostics has been employed in some of the severe *vivax* malaria case studies reported from India, which is particularly important to evaluate the actual burden of *vivax* malaria [2, 3, 4]. In a recent observational and prospective PCR-based study conducted at a tertiary care hospital in Northwestern

India, the involvement of *P. vivax* mono-infection has clearly been proven unequivocally among thirteen children with cerebral malaria and multi-organ dysfunction [5]. Similarly, there is an urgent need for multi-centric and prospective studies by using PCR detections of severely ill malaria patients along with traditional detection methods to assess the genuine burden of severe and fatal disease associated with *vivax* malaria.

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**Conflict of interest** The authors have no potential conflict of interest

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### References

1. Sharma V, Sharma A, Aggarwal A, Bhardwaj G, Aggarwal S Acute Pancreatitis in a Patient with vivax Malaria. JOP. J Pancreas (Online) 2012 Mar 10; 13(2):215-216. PMID:22406604
2. Kochar SK, Mahajan M, Gupta RP, Middha S, Acharya J, Kochar A, et al., Acute attack of AIP (acute intermittent porphyria) with severe vivax malaria associated with convulsions: a case report. J Vector Borne Dis. 2009 Dec; 46(4):307-9. PMID: 19959859
3. Kochar DK, Pakalapati D, Kochar SK, Sirohi P, Khatri MP, Kochar A, et al., An unexpected cause of fever and seizures. Lancet. 2007 Sep 8; 370(9590):908. PMID: 17826172
4. Kochar DK, Saxena V, Singh N, Kochar SK, Kumar SV, Das A. Plasmodium vivax malaria. Emerg Infect Dis. 2005 Jan; 11(1):132-4. PMID: 15705338
5. Tanwar GS, Khatri PC, Sengar GS, Kochar A, Kochar SK, Middha S, et al., Clinical profiles of 13 children with Plasmodium vivax cerebral malaria. Ann Trop Paediatr. 2011; 31(4):351-6. PMID: 22041470

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