

## Mixed Malarial Infection with Pancytopenia in a Child with Acute Lymphoblastic Leukemia: An Unusual Presentation

Sir,

I have read with interest the case report by Ramesh *et al.* on mixed malarial infection associated with pancytopenia in a child with acute lymphoblastic leukemia (ALL).<sup>[1]</sup> Two plausible explanations could be addressed to explain that association. The first is that it is an incidental association. The second is that it is possibly an etiological association. It is noteworthy that severe childhood infections can occasionally be accompanied by bone marrow suppression and that it is unusual for infection-induced marrow aplasia to evolve into acute leukemia.<sup>[2]</sup> I presume that the observed pancytopenia in the case in question was probably the result of malarial parasite acting in rhythm with the failing bone marrow and malarial parasite is possibly one of many factors able of initiating the onset of pre-ALL. Molecular studies are needed to determine the exact mechanism.

Second, India is endemic for malaria with unstable transmission inhibiting the development of immunity and predisposing all age groups to the disease.<sup>[3]</sup> I presume that the case in question sends an important message to the practicing clinicians in malaria-endemic areas to consider underlying malignancy in malaria patients if pancytopenia is refractory despite eradication of malarial infection.

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

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### References

1. Ramesh V, Venkata NM, Sankar J. Mixed malarial infection with pancytopenia in a child with acute lymphoblastic leukemia: An unusual presentation. *Indian J Med Paediatr Oncol* 2017;38:92.
2. Rajendran A, Trehan A, Ahluwalia J, Marwaha RK. Severe systemic infection masking underlying childhood leukemia. *Indian J Hematol Blood Transfus* 2013;29:167-70.
3. Basu S, Sahi PK. Malaria: An update. *Indian J Pediatr* 2017;84:521-8.

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#### DOI:

10.4103/ijmpo.ijmpo\_64\_17

**How to cite this article:** Al-Mendalawi MD. Mixed malarial infection with pancytopenia in a child with acute lymphoblastic leukemia: An unusual presentation. *Indian J Med Paediatr Oncol* 2018;39:551.

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