Letter to the Editor

Abdominal Computed Tomography Scan: A Useful Diagnosis Tool for Early and Delayed Splenic Complications in Malaria

Dear Sir:

We read with great interest the study on the abdominal computed tomography (CT) scan during acute vivax malaria in South Korea by Kim and others.1

In our recent analysis of 55 cases of pathological rupture on the spleen in malaria,2 we found that 23 (42%) were caused by Plasmodium vivax. We therefore agree with Kim and others that infection with P. vivax—less prevalent worldwide than Plasmodium falciparum—likely carry a higher risk of splenic complications than infection with P. falciparum. Acute splenic enlargement, which is as frequent in P. vivax as in P. falciparum infection despite lower mean parasitemia in the former,3 is likely to be a major determinant of both splenic infarction and splenic rupture in malaria. Splenic enlargement during lethal falciparum malaria likely results from splenic congestion with surface-altered and mechanically altered red blood cells (either infected or uninfected), and with migration or local multiplication of white blood cells.4–6 Because patients with vivax malaria rarely die, post-mortem data on the spleen in this context are very limited.7

The mechanistic connections between malaria, splenic infarction, and pathological splenic rupture are not clearly established. Although splenic infarction leads to splenic rupture in a small number of patients,53 of the 55 malaria patients with pathological splenic rupture had no obvious signs of pre-existing infarction.8

Not least, pathological rupture of the spleen and other splenic complications may occur well beyond the acute phase of the malaria attack (median time from fever onset to rupture: 5 d, range: 0–37; median time from malaria diagnosis to rupture: 0 d, range: 0–31).2 Because Kim and others excluded patients in whom the CT scan had been performed more than 3 days after the diagnosis of malaria, a proportion of splenic complications was likely to be ignored in their study.1 Clinicians should be aware of the (small but life-threatening) risk of a delayed splenic rupture after a malaria attack.

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REFERENCES