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## Acute respiratory distress syndrome and Plasmodium ovale malaria

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Title :

Acute respiratory distress syndrome and Plasmodium ovale malaria

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A 56-year old patient was admitted to the emergency department for an hyperthermia (39 C) evolving for 8 days. He had a long history of travels to Africa, the latest in Liberia,

Ivory Coast and Senegal, but had not left France for the last 14 months. Malaria prevention was based on vector control. Chemoprophylaxis was nonsystematic. A thoracic-abdominal-pelvic scan conducted the day before admission had shown no septic focus.

Except for hyperthermia (39°C), clinical examination was normal on admission. Biological tests showed moderate bicytopenia (PNN: 1.14 g/L; P: 101 g/L) and minor hypoxia (PaO<sub>2</sub>: 66 mmHg) and thin and thick smear were prescribed that revealed the presence of *Plasmodium ovale* (0.19%), later genetically identified to be *P. ovale wallikeri* (CT=22). Oral quinine was initiated and the patient kept under observation. After a temporally improvement, he had to be admitted to intensive care on Day 2 because of the rapid onset of a severe respiratory distress. Fig 1 shows the progression of the chest x-ray over 48h. All criteria were met for an Acute Respiratory Distress Syndrome. Exhaustive investigations excluded any other infections, leaving *P. ovale* malaria as the sole etiology. Treatment associated a full 9-dose intravenous artesunate regimen, cefotaxime and rovamycin/vibramycin, and standard measures including prone ventilation. The evolution was further marked by an acute respiratory-weaning-induced pulmonary oedema, but the patient could finally be discharged from intensive care on Day 8, with perfectly restored cardiovascular and pulmonary functions, and under a 14-day treatment with primaquine to prevent relapses. His health has remained excellent seven months post presentation.

*P. ovale* (and maybe more specifically *P. o. wallikeri*) may cause severe respiratory complications. Its diagnosis should not be overlooked despite a long post-travel latency and generally low parasitemia, and patients should be monitored for complication as closely as for other malaria species.

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