mental malaria infection on the metabolism of phenacetin in the rat isolated perfused liver

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Abstract:

1. The effect of infection with the rodent malaria parasite Plasmodium berghei on the metabolism of phenacetin has been investigated in a rat isolated perfused liver preparation. 2. A bolus dose of phenacetin (10 mg) was introduced into the perfusate reservoir of both control (n = 4) and malaria-infected (n = 4) liver preparations, and samples of bile and perfusate were collected (0-4 h) for hplc analysis of phenacetin, paracetamol and its phase II metabolites. 3. Whereas malaria had no effect on the hepatic clearance of phenacetin (control: 0.64 +/- 0.15 versus malaria: 0.66 +/- 0.14 ml min-1), there was a significant reduction in the hepatic clearance of generated paracetamol (control: 1.22 +/- 0.15 versus malaria: 0.41 +/- 0.08 ml min-1) and the total recovery in bile and perfusate of paracetamol glucuronide (control: 1.18 +/- 0.44 versus malaria: 0.29 +/- 0.20 mg). There was no significant change during malaria infection in the total recovery of either phenacetin (control: 1.30 +/- 0.73 versus malaria: 0.79 +/- 0.36 mg) or paracetamol sulphate (control: 0.81 +/- 0.25 versus malaria: 0.74 +/- 0.16 mg),