

# Progesterone metabolites and bile acids in serum of patients with intrahepatic cholestasis of pregnancy: Effect of ursodeoxycholic acid therapy

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The concentrations in serum of sulfated metabolites of progesterone are known to be elevated in patients with intrahepatic cholestasis of pregnancy (ICP). The profiles of these metabolites and conjugated bile acids were analyzed in serum from 11 patients with ICP before and during administration of ursodeoxycholic acid (UDCA) (8 patients) or placebo (3 patients). The clinical condition of 7 of the patients given UDCA improved markedly, and 1 patient given placebo had a spontaneous remission of the disease. The total concentration of conjugated bile acids in the 11 patients was  $25 \pm 6 \text{ } \mu\text{mol/L}$  (mean  $\pm$  SEM) and decreased to  $6.3 \pm 3.5 \text{ } \mu\text{mol/L}$  in the 7 patients responding to treatment with UDCA. The level of 7 $\alpha$ -hydroxy-4-cholesten-3-one was significantly lower ( $7.2 \pm 2.2 \text{ ng/mL}$ ) in patients with ICP than in healthy pregnancy ( $18 \pm 4.6 \text{ ng/mL}$ ) ( $P < .05$ ). The concentrations of 5 $\alpha$ -pregnane-3 $\beta$ ,20 $\beta$ -diol mono- and disulfates decreased by  $52\% \pm 7.9\%$  and  $68\% \pm 5.5\%$ , respectively, in the patients resp