Short communication

Effect of tamoxifen and raloxifene on the conjugation of bile acids with taurine and glycine in ovariectomized rats

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Abstract
The selective estrogen receptor modulators tamoxifen and raloxifene represent a major therapeutic advance for clinical practice. Unlike estrogens, which are uniformly agonists, tamoxifen and raloxifene exert selective agonistic or antagonistic effects on various estrogen target tissues. The aim of the study was to evaluate the influence of tamoxifen and raloxifene on the conversion of cholesterol to bile acids in estrogen deficiency in rats. The study included 40 female Wistar rats. The animals were divided into four groups: sham operated control, ovariectomized control, ovariectomized rats treated with tamoxifen, ovariectomized rats treated with raloxifene. After 42 days of drug administration, bile was collected under anesthesia after administration of radioactive 4-¹⁴C cholesterol. Bile was assayed for concentration of ¹⁴C bile acids conjugated with taurine and glycine after thin-layer chromatography separation by the use of isotopic technique. In rats treated with tamoxifen and raloxifene, the statistically significant increase in concentration of bile acids conjugated with glycine was observed as compared to ovariectomized animals from control group. Moreover, in rats treated with tamoxifen the concentration of bile acids conjugated with taurine significantly increased. The results of the present study suggest that tamoxifen and raloxifene increase the concentrations of conjugated bile acids in bile.

Key words:
bile acids, gallstones, tamoxifen, raloxifene