

Liver Histopathological Findings after Treatment with Anastrozole and Letrozole in Ovariectomized Rats

Authors : Ioannis Boutas, Vasilios Pergialiotis, Nicolaos Salakos, George Agrogiannis, Panagiotis Konstantopoulos, Laskarina-Maria Korou, Theodoros Kalampokas, Odysseas Gregoriou, George Creatsas, Despina Perrea

Abstract : Introduction: The effect of third generation aromatase inhibitors in the lipid profile among women with breast cancer, present diversities. It has been also shown that low levels of estrogens affect liver metabolism in mice in numerous ways, such as lipid accumulation and hepatic steatosis. Materials and Methods: Forty-five female Wistar rats underwent surgical ovariectomy. The animals were anesthetized with a combination of ketamine (75 mg/kg) and xylazine (10 mg/kg) which were administered intraperitoneally. After the ovariectomy, the operated animals were randomized in three groups. The first group did not receive any drug regimen (ovariectomized control group). The second group received Anastrozole and the third group received Letrozole. Four months after the initiation of the study, the animals were euthanized and livers were dissected immediately for further histopathological analysis. The histological features were grouped into 4 broad categories: steatosis, ballooning, portal inflammation and lobular activity. A score from 0 (absence) to 3 (severe) was assigned to each parameter. Results: The liver pathology analysis revealed significant differences among groups with favored mild steatosis and ballooning among animals that received Anastrozole or Letrozole. Conclusion: The effect of Anastrozole and Letrozole on liver function have not yet been clarified. In our study mild histological liver alterations seem also to occur and these alterations should be taken in mind in future clinical studies

Keywords : anastrozole, letrozole, liver, rats

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