Clinical, pathological and immunohistochemical study of feline mammary fibroepithelial hyperplasia following a single injection of depot medroxyprogesterone acetate

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Feline mammary fibroepithelial hyperplasia (FMFH) following a single injection of depot medroxyprogesterone acetate (MPA) was observed in eight intact young queens. The repository compound is marketed as a veterinary product by a local pharmaceutical company with an indication for contraception in cats. The drug was administered according to the recommended doses and injection frequencies. Serum hormone assays performed immediately before neutering and 3 weeks after neutering detected persistently high levels of progesterone suggesting that depot MPA was still exerting its influence. No corpora lutea were found in those cases ruling out ovaries as the main site of progesterone. Immunohistochemistry performed on the hyperplastic mammary glands detected progesterone receptors in the nuclei of ductal cells, and growth hormone (GH) and insulin-like growth factor-I (IGF-I) in the cytoplasm of ductal epithelium. Overdosing should be considered here as the animals received at least 10 mg/kg of depot MPA in a single injection. Progestin-induced local synthesis of GH and IGF-I in mammary epithelial cells is suggested as one of the pathogenic mechanisms involved in the development of FMFH.

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