

Dynamics of Eosinophils in the Uterus after Oestrogen Administration

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To investigate the role of the eosinophil leukocytes in the early oestrogenic responses in the uterus, the kinetics of oestrogen-induced uterine eosinophilia and other parameters of oestrogen stimulation were studied at very early times. Uterine eosinophils increase as early as 5 min after an intravenous injection of oestradiol to immature rats, much earlier than several other changes in the early parameters of oestrogen stimulation. Large number of uterine eosinophils are found attached to the wall of small uterine blood vessels at early times. To elucidate the mechanisms involved in the specific attraction of eosinophils to the uterus in the presence of oestrogens, the in vivo localisation of oestrogens in the rat uterus at early times was studied using a radioautographic technique. Oestrogen receptors were found in the surface of eosinophils and in the wall of small uterine blood vessels. This simultaneous presence of both oestrogen receptors is proposed to explain the specific attraction of eosinophils to the uterus in the presence of oestrogens.