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DEHYDROEPIANDROSTERONE SULPHATE CONCENTRATIONS IN BREAST DUCT FLUID

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Breast secretions may contain remarkably high levels of dehydroepiandrosterone sulphate (DHAS). This finding has been considered to be related with apocrine metaplasia of mammary epithelium. Both DHAS (and its metabolites) and apocrine metaplasia have been suspected to be involved in aetiology of breast cancer. We studied the DHAS concentrations in breast duct fluids obtained by nipple aspiration from 70 normal women and 30 patients affected by Gross Cystic Disease of the breast (GCD). No DHAS could be detected in breast fluid from 47% of normal subjects aged 20-30 yrs. In the next group (31-40 yrs), undetectable levels of DHAS were found only in 30% of subjects, whereas all normal subjects aged between 41 and 50 yrs showed high DHAS levels in breast fluid. In patients affected by GCD, DHAS levels in breast fluid were higher than in age-matched controls (21.1 ± 12.2 mg/dl VS 7.4 ± 7.2 mg/dl; $\bar{X} \pm SD$; $p < .02$). In the same group, undetectable levels of DHAS in breast fluid were found only in 8% of subjects. Our findings lead to the suggestion that apocrine metaplasia in breast tissue is a very common phenomenon and is age-related. Thus, it seems unlikely that apocrine metaplasia "per se" may be considered as a risk factor for breast cancer. Nevertheless, the higher levels of DHAS found in breast secretions of patients affected by GCD may be considered a factor modifying the mammary hormonal environment, possibly involved in the clinical course of the disease.

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HORMONAL CONTENT OF PERITONEAL FLUID (PF) IN PATIENTS WITH POLYCYSTIC OVARY SYNDROME (PCO).

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Plasma (Pl) and PF concentrations of several hormones were evaluated in 15 patients with PCO aged from 20 to 45. PF was obtained by laparoscopy and Pl collected before general anaesthesia. As previously found in normal patients, concentrations of ovarian hormones were higher in PF (PF/Pl: Estradiol (E_2) = 2.0; Progesterone (P) = 1.4; Testosterone = 1.2; 17OH-P = 1.5; Androstenedione (A) = 2.5), while other hormones showed values of PF/Pl always < 1 (LH=0.6; FSH=0.5; DHA-S=0.6; Cortisol (F)=0.5). However the absolute PF levels of E_2 and P were lower ($p < 0.01$) to those observed during late follicular and overall luteal phase. Analysis of PF A concentrations well differentiated in PCO two groups of patients: G.I (n.=9) (PF= 7911 ± 2566 pg/ml) and G.II (n.=6) (PF = 1514 ± 356 pg/ml; $p < 0.01$). PF/Pl ratios were 2.7 and 1.7, respectively. Furthermore two groups differed for several clinical characteristics such as value of LH/FSH plasma ratio (G.I: LH/FSH < 2.5 = 29%; > 2.5 = 71%; - G.II = 66%, 33%) menstrual history (G.I=amenorrhea = 23%; oligomenorrhea 77% - G.II = 66%; 33%) and anatomo-functional aspects of ovary. These data confirm that PF is an important and "direct" marker of function and steroidogenesis of ovarian activity and its use for investigating different clinical conditions (ovulation detection, PCO, androgenism) appears to be of particular usefulness.