73
INCREASED SALIVARY ESTRIOL LEVELS IN CYSTIC BREAST DISEASE.

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Different results have been reported regarding the plasma hormone pattern in human cystic breast disease and the relationship between ovarian function and breast pathophysiology has not yet been defined, also in terms of hormonal activity. Seeking a hormonal etiology to this possible relationship we have measured the estriol levels in saliva and plasma by means of a specific RIA procedure in women with cystic breast disease (n=22, age range 21-40 yrs.) and in age matched controls (n=20).No difference in the plasma estriol levels (CBD= 14.1 $\pm$ 2.74 vs. controls = 13.7 $\pm$ 2.10 pg/ml.)between the study groups was observed. In contrast salivary values were significantly elevated ($p<0.05$) in the women with cystic breast disease (0.299 $\pm$ 0.055 pg/ml.) in comparison to the age matched controls (0.162 $\pm$ 0.040 pg/ml.). We tentatively conclude that this increased estriol level in saliva is of value in the diagnosis of the disease and represents a significant risk factor, possibly mediated by one of the products of 16α-hydroxylation, for the estrogen dependent tumors of the breast.

74
SALIVARY ANDROGENS: AN EXPRESSION OF THE PERIPHERAL METABOLISM ?

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The known difference of the salivary/free plasma testosterone ratio between males and females led us to investigate the role played by the salivary glands in the androgen metabolism. For this purpose we have measured, by TLC+RIA, testosterone (T), androstenedione (A) and 5α-dihydrotestosterone (DHT) on matched plasma (p) and saliva (s) samples from males (6 normals (a), 1 primary hypogonadic (b), 2 secondary hypogonadics (c)) and females (4 normals (d) and 4 hirsutes (e) in early follicular phase, 2 patients with 21-hydroxylase deficiency (f),1 with hilus-cells tumor of the ovary (g)). In all subjects we have also determined the plasma concentrations of SHBG and free testosterone (fT). We report the results (mean values) of T_p(ng /ml), T_s (ng/dl), T_s/fT, A_s/T_s, respectively: a) 5.6, 6.7, 0.67, 1.1 b) 0.22, 0.58, 2.9, 6.3 c) 0.25, 1.1, 3.5, 6.1 d) 0.28, 1.0, 4.2, 8.2 e) 0.77, 2.9, 3.0, 7.3 f) 2.1, 12.9, 3.0, 8.6 g) 4.0, 6.2, 1.1, 1.4. These data suggest that the T_s/fT ratio (y) is not so dependent on the T_p levels as on the A_s/T_s values (x) ($y=0.321x+0.749$, $r=0.755$, $n=19$, $p<0.001$). The implication is that the salivary glands metabolize androgens mainly by reductive pathways, as it appears from studies on humans and animals. This is particularly evident in the cases f) and g). Therefore, the saliva concentration of androgens, besides reflecting the free plasma quota, could be a dynamic index, related to the peripheral metabolism.