



Abstract: P1

Oestrogen, progesterone and androgen receptors in ovarian neoplasm: correlation between immunohistochemical and biochemical receptor analyses

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1. Aims

In ovarian tumours the oestrogen (ER), progesterone (PR) and androgen (AR) receptor status were measured by an immunohistochemical assay using cryostat sections and a biochemical cytosol assay.

2. Methods

Our study concerned 27 ovarian tumours, including two borderline tumours. The immunohistochemical staining of the tumours was scored semiquantitatively, incorporating both the intensity and the percentage of positive staining (Histo (H)-SCORE). Tumours with a H-SCORE of 10 or more were considered positive. The epithelial and stromal fraction of the tumours were analysed separately. To study the receptor heterogeneity one to four samples of a tumour were analysed. The results were analysed by correlation analysis, *P* values of 0.05 or lower were considered significant.

3. Results

H-SCORE rating of the ER in the epithelial fraction gave a significant correlation with the quantitative ER chemical receptor values ($r=0.408$). The AR in the epithelial and stromal fractions correlated ($r=0.741$), and AR H-SCORE in epithelial fraction correlated with the biochemical assay ($r=0.463$). By biochemical analyses 12 of the 26 tumours were transitional AR positive, all others were negative, due to heterogeneity of the tumours.

4. Conclusions

Immunohistochemical and biochemical analyses of hormone receptors in ovarian tumours correlated weakly or not at all. Heterogeneity of the receptor within the tumour, presence of especially PR and AR in the stromal section of the tumour partly account for this observation. Both biochemical and immunohistochemical AR receptor status are much lower in our study compared with previous reports. We have demonstrated that the ER is mostly present in the epithelial component, while PR and AR can also be found in the stromal component.

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