

IMMUNOHISTOCHEMICAL STUDY OF HORMONAL RECEPTORS IN MENINGIOMAS  
(Abstract)\*. Thesis. Porto Alegre, 1996.

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The author assessed 246 cases of meningiomas, diagnosed in the Pathology Department of Fundação Faculdade Federal de Ciências Médicas de Porto Alegre during 25 years (from March 1968 to March 1993). Those tumors were classified as typical, atypical, anaplastic, and papillary, according to previously defined criteria. From these cases, 116 tumours (60 typical, 46 atypical, 9 anaplastic and 1 papillary) were randomly selected, being used an immunohistochemical technique for estrogen and progesterone receptors, attempting to determine if there is any difference between typical and non-typical tumours, in relation to hormone receptors.

Among the criteria used to define non-typical tumours, brain invasion was predominant in 62.3%. There were areas of necrosis in 45.9% of meningiomas, 36% displayed increased mitotic activity, 39.3% were hypercellular, and 32.8% cytological anaplasia.

Meningiomas were typical in 75.22%, atypical in 19.1%, anaplastic in 4.47%, and papillary in 1.21% of the cases.

Supratentorial location was more frequent in both groups (typical and non-typical), and female gender predominated. The most afflicted age group was between 51 and 60 years of age.

There was recurrence in 3.78% of typical, 42.55% of atypical, 45.45% of anaplastic, and there was no recurrence in those tumours with papillary features.

The immunohistochemical technique to estrogen receptors was negative in all meningiomas studied.

Progesterone receptors were detected by immunohistochemistry in 58.33% of typical, and in 48.21% of non-typical meningiomas. This difference was not statistically significant. However, individually considering the criteria used for selection of non-typical tumours, those that concurrently displayed brain invasion and increased mitotic activity or necrosis, as well as the summation of those three features, were predominantly negative for progesterone receptors (respectively  $p=0.038$ ;  $p=0.001$ ; and  $p=0.044$ ).

The author's conclusion was that the criteria used to define typical and non-typical were adequate to predict a higher chance of tumour recurrence; that estrogen receptor were not present in meningiomas; that progesterone receptors in isolation is not enough to predict a higher tumoral malignancy; and in tumours that showed brain invasion, associated to necrosis and/or increased mitotic activity, there was a predominance of negatives to progesterone receptors, inferring this group should display a poor response to a possible hormonal manipulation.

KEY WORDS: meningiomas, progesterone receptor, oestrogen receptor, immunohistochemistry, histologic features.

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