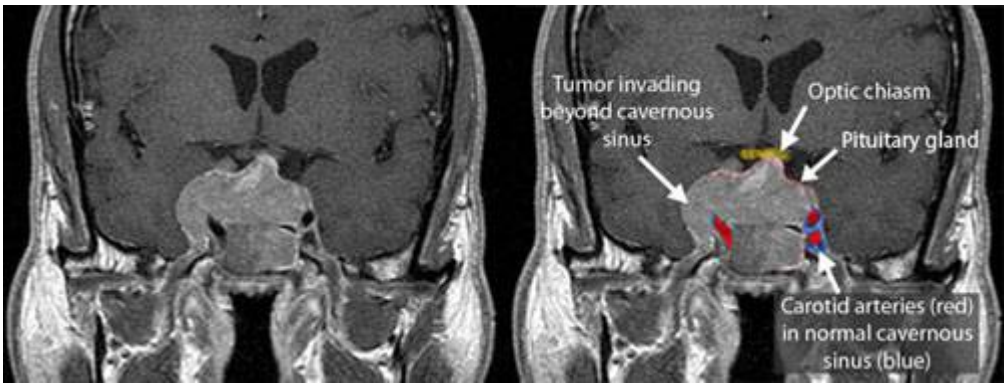
Pituitary Neuroendocrine Tumor Natural History



pituitary neuroendocrine tumors (PAs) are often detected as incidental findings. However, the natural history remains unclear. The objective of a study of Hwang et al., was to evaluate the natural history and growth pattern of untreated PAs.

Between 2003 and 2014, 59 PAs were managed with clinico-radiological follow up for longer than 12 months without any kind of therapeutic intervention. Tumor volumes were calculated at initial and last follow-up visit, and tumor growth during the observation period was determined. Data were analyzed according to clinical and imaging characteristics.

The mean initial and last tumor volume and diameter were 1.83±2.97 mL and 13.77±6.45 mm, 2.85±4.47 mL and 15.75±8.08 mm, respectively. The mean annual tumor growth rate was 0.33±0.68 mL/year during a mean observation period of 46.8±32.1 months. Sixteen (27%) PAs showed tumor growth. The initial tumor size (HR, 1.140; 95% confidence interval, 1.003-1.295; p=0.045) was the independent predictive factor that determined the tumor growth. Six patients (11%) of 56 conservatively managed non-symptomatic PAs underwent resection for aggravating visual symptoms with mean interval of 34.5 months from diagnosis. By Cox regression analysis, PAs of last longest diameter over 21.75 mm were a significant prognostic factor for eventual treatment.

The initial tumor size of PAs was independently associated with the tumor growth. Six patients (11%) of conservatively managed PAs were likely to be treated eventually. PAs of last follow-up longest diameter over 21.75 mm were a significant prognostic factor for treatment. Further studies with a large series are required to determine treatment strategy [1].

Despite the relatively high prevalence of pituitary incidentalomas (PIs)/nonfunctioning pituitary neuroendocrine tumors (NFPAs), the evidence on the natural history of these entities is scarce and of low quality. PIs/NFPAs seem to have fairly rare complications that may be more common when lesions are large (>10 mm) and solid [2].

The 'watch and wait' policy seems reasonable for microadenomas but is probably not a safe approach for macroadenomas, which appear to have a significant growth potential; in these cases, given the lack of established medical treatment, the decision for surgical intervention should balance the

presence of significant comorbidities and the anaesthetic/peri-operative risks at presentation against the probability of tumour enlargement and its consequences, as well as the possible loss of advantages associated with early operation [3].

References

1)

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