

**RADIOTHERAPY
PITUITARY TUMORS
AND COGNITION**

Patients previously treated for a nonfunctioning pituitary macroadenoma have a degree of impairment in cognitive function, but this impairment is not related to radiotherapy, researchers from The Netherlands reveal.

“We previously found, by using self-rated questionnaires, that patients with nonfunctioning pituitary adenoma who had undergone surgery and radiotherapy did not report more cognitive problems than those who had undergone surgery alone. The logical next step was a formal assessment of cognitive functioning in these patients,” explains senior researcher André P. van Beek from the University Medical Center Groningen, The Netherlands.

The investigators used tests to assess the verbal memory and executive functioning (which includes planning capacities) of 84 patients who had undergone transsphenoidal surgery alone ($n = 45$) or transsphenoidal surgery and radiotherapy ($n = 39$) for the treatment of nonfunctioning pituitary macroadenoma an average of 8.6 years earlier and who were on stable hormone replacement therapy.

Both the memory and executive function of the patients was significantly below that of a healthy reference population. However, the cognitive function of patients who had received radiotherapy was not significantly different from that of patients who had received surgery alone. “Small effects may still be possible,” cautions van Beek, and the team now plan to use radiation dosimetry to test whether a relationship can be established between radiation field and cognitive performance.

In the meantime, he hopes the findings will be reassuring. “We can take away this concern for patients and their physicians on the risks of pituitary radiotherapy.”

Carol Wilson

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