

### 162. Immunohypophysitis, a cause of hypopituitarism?

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Patients who have received pituitary implants of iridium<sup>192</sup> may develop hypopituitarism. One mechanism might be autoimmunohypophysitis. Therefore the serum of these patients was analyzed for the presence of autoantibodies against pituitary cells.

Serum of patients was tested for autoimmunantibodies by immunofluorescence technique using cryostat tissue slices of human pituitary tumors and of normal pituitary tissue, and FTIC labelled goat antiserum against human immunoglobulins as described by Bottazzo et al. The pituitary cells were identified by demonstration of the different hormones on the same histologic preparation by using rhodamine-labelled antibodies. The results obtained by immunofluorescence were controlled by the peroxidase-antiperoxidase method on semi-thin slices of pituitary tissue.

In 11 of 55 patients tested, antibodies against pituitary cells were observed. 11 patients showed reactivity against ACTH-containing cells; in 8 patients reactivity against cells containing growth hormone was demonstrated. The serum of 5 patients reacted with cells containing gonadotropins. The serum of 44 patients did not react with any pituitary cell. Correlation of the data to pituitary function in these patients indicates that there may be no link between pituitary insufficiency and the presence of antibodies against pituitary cells.

#### References

Bottazzo, G. F., Doniach, D.: *J R Soc Med* 71 (1978), 433

### 163. Results of modern radiological investigation in Cushing's disease

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In a consecutive series of 20 patients with ACTH secreting microadenomas of the pituitary causing Cushing's disease, the value of modern radiological investigation was demonstrated.

*Methods:* The thin-collimation CT images (2 mm) with direct axial sections and sagittal as well as coronal reconstructions were analysed. A Siemens DR 3 scanner was used. CT scans were performed prior to and after the infusion of 100 ml megluminioxitalamate. Preoperatively all patients also had plain skull x-rays and polytomography of the sella at 2 mm intervals in the lateral and frontal projection. Radiological findings were compared with the operative aspects, outlined by the neurosurgeon after performing transsphenoidal microsurgery.

*Results:* The diameter of the microadenomas ranged from 4–10 mm and was less than 5 mm in four cases. The presence of an intrasellar lesion was correctly identified in each patient studied on the basis of CT images. Sagittal reconstructions proved to be most useful. However, the exact localisation and total extent of the lesion could be predicted in only a minority (35%) of the cases. Whenever the consistency of the tumour was soft, these parts appeared hypodense on the CT images with high reliability. Tumour tissue of firmer consistency was usually seen to be isodense in the CT. Difficulties in predicting tumour localisation and extent occurred when the consistency of tumour tissue varied in a patient. In these cases and in tumours with extrasellar extension, additional sella polytomographs are useful. The exact localisation and total extent of the microadenoma could be predicted in 4 patients with a sella turcica of normal size by thin-collimation CT. Two of them also had normal polytomographs. Contrast infusion did not lead to a further differentiation between pituitary and tumour tissue. When tumour tissue appeared isodense, enhancement was similar to the normal pituitary gland. Hypodense lesions were found to be non-enhancing. CT findings obtained with the technique described above were compared with a small series of "dynamic scans" according to [2]. Aside from detecting microadenomas, an associated "empty-sella-syndrome" could be predicted by thin-cut CT images with high reliability as well.