

INDIRECT IMMUNOFLUORESCENCE FOR DETECTION OF PITUITARY ANTIBODIES

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INTRODUCTION



Definitive diagnosis of lymphocytic hypophysitis (LH) lacks a pathological analysis. The detection of pituitary antibodies (PAB) with the current methods presents variable results and its clinical utility is therefore limited. Recently, new methods were released for the interpretation of indirect immunofluorescence (IIF), which can increase the specificity for detection of PAB.

PATIENTS AND METHODS

We evaluated 4 patients followed in Endocrinology consultation with clinical suspicion of LH (Patient 1: 49-yo female with pan-hypopituitarism beginning forty days after delivery and an empty sella on MRI; Patient 2: 20-yo male with isolated ACTH deficiency and gynecomastia; Patient 3: 59-yo female with previous complaints of severe headache and diplopia starting at 42 years, MRI showing pituitary enlargement with diffuse enhancement after contrast and pan-hypopituitarism ever since; Patient 4: 39-yo male with hypogonadotropic hypogonadism and autoimmune thyroiditis) and one patient with definitive diagnosis of LH (Patient 5: 27-yo female, with severe headaches beginning one week before delivery, MRI compatible with a pituitary macroadenoma with diffuse enhancement after contrast). Detection of PAB by IIF was carried out in a specialized centre. The presence of PAB was considered positive whenever a granular or diffuse cytosolic pattern were present, after using purified IgG and Fc blockade, if necessary.

RESULTS

CASE NR.	IMMUNOFLUORESCENCE STAINING PATTERN	CLINICAL PRESENTATION
1	Cytosolic negative	LH suspicion
2	Cytosolic perinuclear (1+)	LH suspicion
3	Cytosolic negative	LH suspicion
4	Cytosolic positive, granular	LH suspicion
5	Cytosolic positive, diffuse	LH confirmed

 Negative results
 Positive results

POSITIVE RESULTS IN 40% PATIENTS

CONCLUSION

The patient with histological diagnosis of LH exhibits a diffuse cytosolic pattern, as usually happens in pituitary disease of autoimmune etiology. The granular cytosolic pattern of patient 4, which is strongly suggestive of autoimmunity, might establish diagnosis of LH. Detection of PAB by IFI, according to the immunostaining patterns, can help in the classification and management of these patients (for example, in avoiding unnecessary surgery).

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