

**English: Sex hormones, CSF and serum leptin in patients with idiopathic intracranial hypertension**

**Abstract**

**Background:** Idiopathic intracranial hypertension (IIH) is typically seen in females of childbearing period; therefore, it

is possible that female sex hormones have a pathogenic role in IIH. Obesity is considered as a strong risk factor for IIH,

Leptin levels in the serum and CSF were found to be positively correlated with anthropological measures of obesity.

The role of leptin and sex hormones in the pathogenesis of idiopathic intracranial hypertension is not fully understood.

The aim of this work was to assess CSF leptin, serum leptin, estradiol, testosterone, Dehydroepiandrosterone

sulfate (DHEAS) levels in idiopathic intracranial hypertension (IIH) patients.

**Results:** This is a case control study which was conducted on 38 IIH female patients and 38 females as controls. IIH

patients had significantly higher levels of serum Leptin, CSF Leptin, serum estradiol and serum testosterone than con

trols ( $P$  value $<0.001$ ,  $<0.001$ ,  $0.005$  and  $<0.001$ , respectively), whereas there was no statistically significant difference

between IIH patients and controls in serum DHEAS ( $P$  value $=0.142$ ). IIH patients with body mass index (BMI) $\geq 30$  kg/

m<sup>2</sup> had significantly higher levels of serum Leptin, CSF Leptin, serum estradiol, serum testosterone, and serum DHEAS

than IIH patients with BMI  $<30$  kg/m<sup>2</sup> ( $P$  value $<0.001$ ,  $<0.001$ ,  $0.009$ ,  $<0.001$ , and  $<0.001$ , respectively).

**Conclusions:** Patients with IIH express a characteristic elevation in CSF leptin, serum leptin, estradiol and testosterone

levels. These hormones are significantly elevated in patients with high BMI.

**Keywords:** IIH, Leptin, Sex hormones, BMI, Papilledema

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