

SYSTEMATIC PROSPECTIVE STUDY OF EYE FUNDUSCOPY AFTER STARTING TREATMENT WITH GROWTH HORMONE IN 289 PATIENTS.

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INTRODUCTION:

Idiopathic intracranial hypertension (IIH) is a rare entity in childhood. It is characterized by signs and symptoms of **increased intracranial pressure with normal neurological examination** (except for possible paresis of the sixth cranial nerve), cerebrospinal fluid study and neuroimaging.

The **association between IIH and treatment with growth hormone (GH)** was first reported in 1993 by the Food and Drug Administration and it has been later demonstrated.

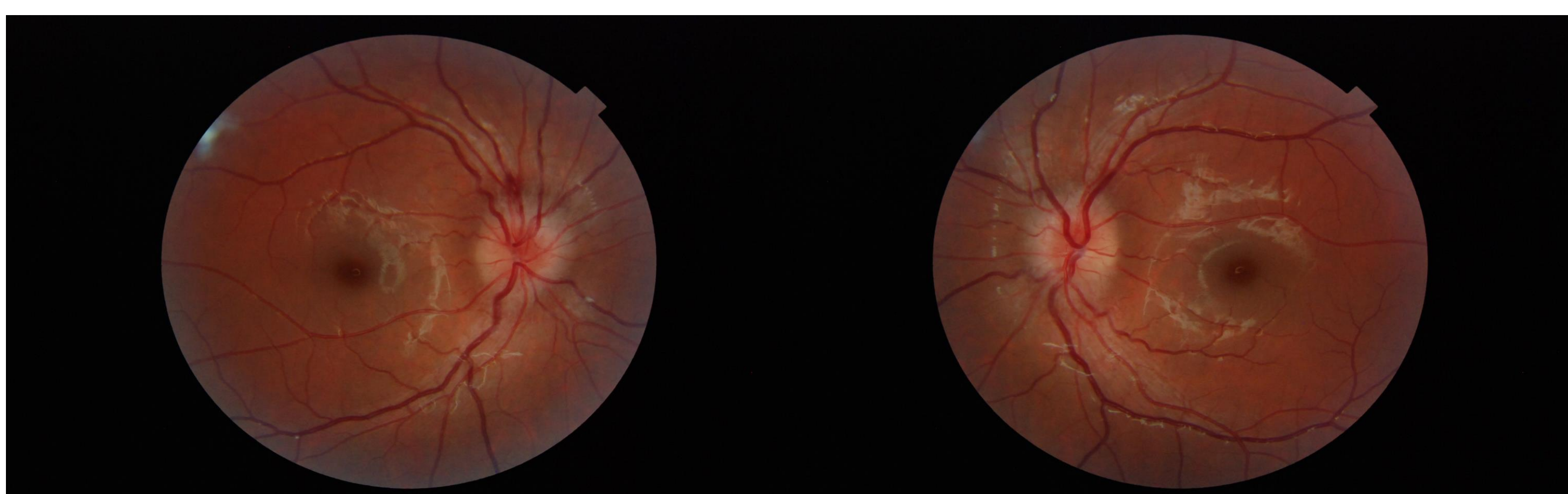
Incidence of IIH varies between 0.025-0.03% of GH treatments. It usually occurs a few **weeks after starting treatment** and its suspension reverses the symptomatology. **The examination of eye funduscopy permits its diagnosis.**

MATERIAL

AND METHODS:

Prospective descriptive study performed by pediatric ophthalmologist. **Examination of eye funduscopy before and 3 months after starting treatment with GH** in patients with short stature and the following diagnoses:

- **GH deficiency** (n = 238, 82%), of which idiopathic (IGHD) in 162 (55%) and associated with other diseases or comorbidities in 87 (GHD, 30%)
- **Small for gestational age** (n = 33, 11%)
- **Prader-Willi syndrome** (n = 3, 1%)
- **SHOX gene mutation** (n = 5, 1.7%)



Eye funduscopy of case 1, where bilateral papilledema is observed.

RESULTS:

306 patients were included; 289 completed follow-up. 5 patients (1.7%) presented papilledema after GH onset (see table attached). All of them were asymptomatic.

Case	Sex/ Age (y)	Time Between GH and diagnose	GH Dosage (mg/kg/d)	Treatment indication	Another IIH risk factor
1	M /14	2 month	0,028	IGHD	Previous IIH + obesity
2	M / 3	3 month	0,032	GHD + pituitary hypoplasia	no
3	M /11	3 month	0,03	GHD + microcefaly	no
4	M /10	3 month	0,025	GHD due to craneofaringioma	Ventriculo-peritoneal shunt system
5	F / 4	3 month	0,029	GHD + global development delay	no

CONCLUSION:

Incidence of IIH in patients under treatment with GH is higher in our sample than described.

In asymptomatic IGHD patients without risk factor for IIH, we **do not consider it necessary to perform eye funduscopy examination after starting treatment with growth hormone.**

