ENDOCRINE DISORDERS IN CHILDREN WITH OPTIC CHIASM GLIOMA

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BACKGROUND

Glioma 40% of central nervous system tumors in children

Localizations: cerebellum, brainstem and optic pathway.

Pituitary function in children with optic chiasm glioma may be impaired.

OBJECTIVES

- To describe the frequency of endocrine abnormalities at diagnosis of the tumor and over the follow-up period in a group of children with chiasmatic glioma
- To assess the relation of endocrine afectation with different variables

PATIENTS AND METHODS

Retrospective study

Patients under 14 year old

optic Followed chiasm for glioma

Endocrinology a Pediatric consultation

Semiannual visits

Sent from Pediatric Oncology or Neurology units

Along a period of 15 years (2000-2014)

Diagnosed Magnetic by Resonance imaging

Variables

Sex

Age at diagnosis

Personal history of neurofibromatosis (NF)

Signs and symptoms at presentation

Primary treatment of the tumor

Endocrine abnormalities at diagnosis and over the follow-up period.

Statistic analysis

Qualitative variables are expessed as percentages

Quantitative variables mean (standard deviation).

Statistical tests Fisher and Wilconson.

RESULTS

Description of patients and comparison between those with and without neurofibromatosis (NF)

Wh	ole group	NF	No NF	р
N	14	8	6	
Women	6/14	4/8	2/6	0.63
Age at diagnosis (years)	2.97 ± 2.32	3.41±2,43	2.39±2,25	0.33
Follow-up time (years)	$9.64 \pm 3,30$	9.62±3.81	9.67±2.80	1.00
Reason of consultation				0.07
- neuro-ophthalmic	8/14	6/8	2/6	
- subclinical (neuroimaging	g) 3/14	0/8	3/6	
- Endocrine	3/14	2/8	1/6	
- precocious puberty	3/14	2/8	1/6	
 pituitary deficiency 	0/14	0/8	0/6	
Primary treatment of glid	oma			0.02
- Surgery	1/14	1/8	1/6	
- Chemotherapy	3/14	2/8		
- Chemo and radiotherapy	1/14	1/8		
- Surgery and chemothera	py 2/14	2/8		
- Surgery, chemo and radio	oth 1/14	1/8		
- None	6/14	1/8	5/6	

Proportion of cases with endocrine disorders at the end of the follow-up period and relation with other variables

Endocrine disord Prec pub Deficiencies

Whole group	12/14	8/14	5/14
Neurofibromatosis - No - Yes	p=1.00	p=0.63	p=0,30
	7/8	4/8	4/8
	5/6	4/6	1/6
Primary treatment - None - Some	p=1.00	p=0.14	p=0.03
	5/6	5/6	0/6
	7/8	3/8	5/8

Diagnosis before age of 5 with neuro-ophthalmic signs

	p=1.00	p=0.10	p=0.02
- No	6/7	6/7	0/7
- Yes	6/7	2/7	5/7

CASE WITH MORE ENDOCRINE DISORDERS

Age at diagnosis: 7 mouths. No NF.

Presentation: bilateral proptosis and cranial enlargement

Primary treatment: surgery, chemo and radiotherapy

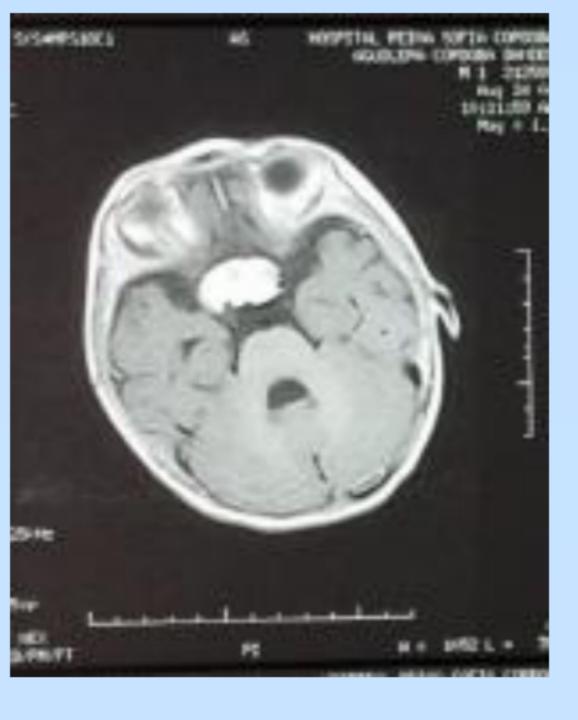
Endocrine follow-up

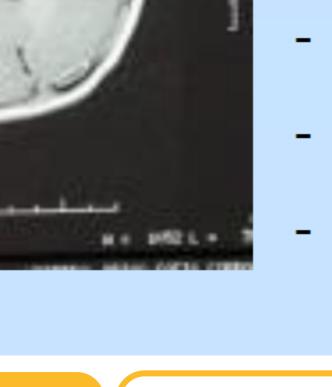
- Precocious puberty at age of 8 years
- GH, TSH deficiency at 12 years
- LH, FSH deficiency at 14 years

CONCLUSIONS

Children with optic chiasm glioma may present endocrine disorders from the time of diagnosis of the tumor and, mainly, along its evolution.

Precocious puberty is the most frequent abnormality. Pituitary deficiencies are related to more aggressive tumors (those presenting with neuro-ophthalmic signs before the age of five years or requiring primary treatment).





Poster

presented at:





