

10 YEARS REVIEW OF ENDOCRINE DISEASES IN SPANISH PATIENTS DIAGNOSED WITH PRIMARY BRAIN TUMORS IN A TERTIARY HOSPITAL.

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Background:

Pediatric Central Nervous System (CNS) neoplasms are the most frequent solid tumors in children. Since the increase in survival, the patients are in high risk of developing long term sequelae. Endocrinological sequelae may be due to the oncological disease itself but usually derived from the treatment received, and they affect 20-50% of patients long-term. We aimed to review our experience from 2005 to 2015.

Objectives

To establish the incidence of endocrinological complications and their characteristics, in a group of pediatric patients diagnosed with brain tumors in a tertiary hospital in the period from 2005 to 2015.

Methods

An observational retrospective study of clinical diagnosis of oncological disease and subsequent monitoring endocrinological data. Collected both at diagnosis and follow-up, including anthropometric variables, oncological treatment received and endocrinological pathology diagnosed. Statistical analysis SPSS22.

RESULTS

n = 103 patients
(48% female)

- **Age at diagnosis:** 6.8 ± 4.2 years .
- **Anatomical location:** Posterior fossa (48%) Midline (35%)
- **Histological types:** Astrocytomas (29%), medulloblastomas/PNET (17%), Craniopharyngiomas (7%).
- **Global mortality:** 42%.

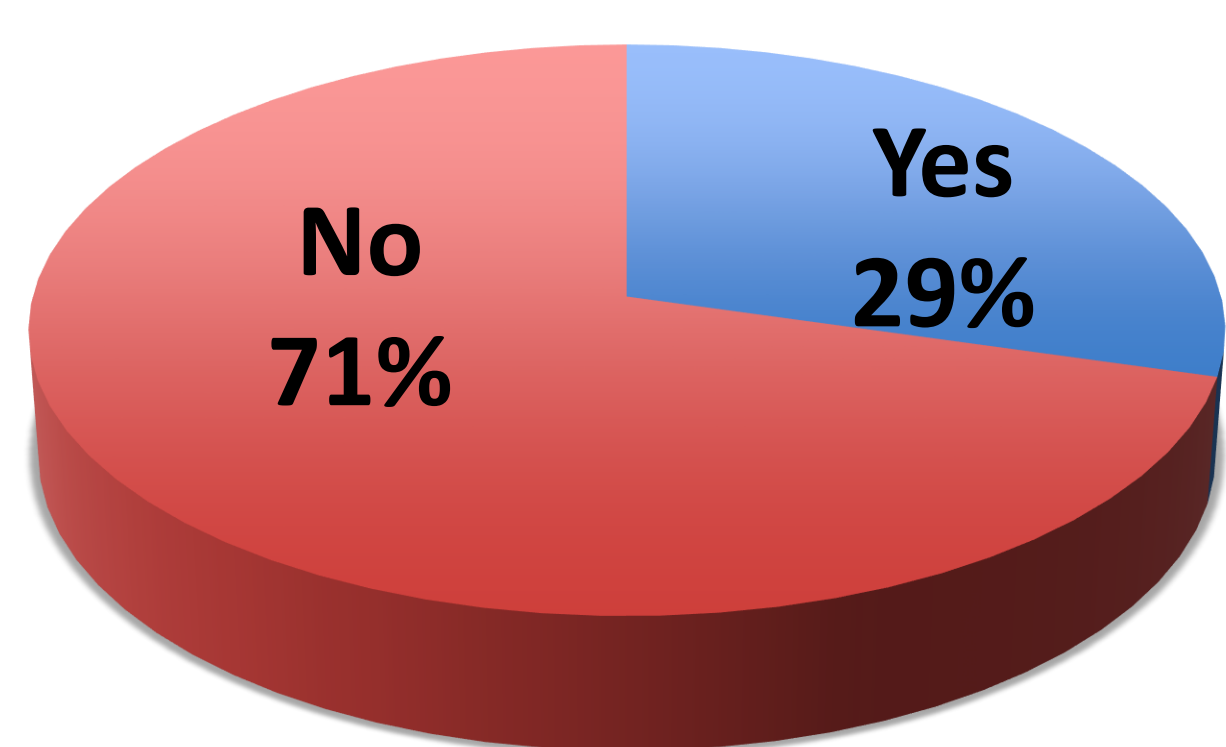
Subgroup of survivors (n=59)

- Older age at diagnosis: 7.6 ± 4.5 vs. 5.8 ± 3.6 (p=0.036)
- More complete **surgical resection:** 67% vs. 29% (p=0.03)
- **Less posterior fossa** involvement: 40% vs. 60% (p=0.03).
- **Survival** was higher in astrocytomas and craniopharyngiomas. (p=0.03).
- **Type of Treatment:** Surgery 100%; Chemotherapy and radiotherapy were given in 39% and 29%, respectively.
- **23%** of survivor developed **transient** postoperative neurohypophyseal deficiency (SIADH, diabetes insipidus or both).

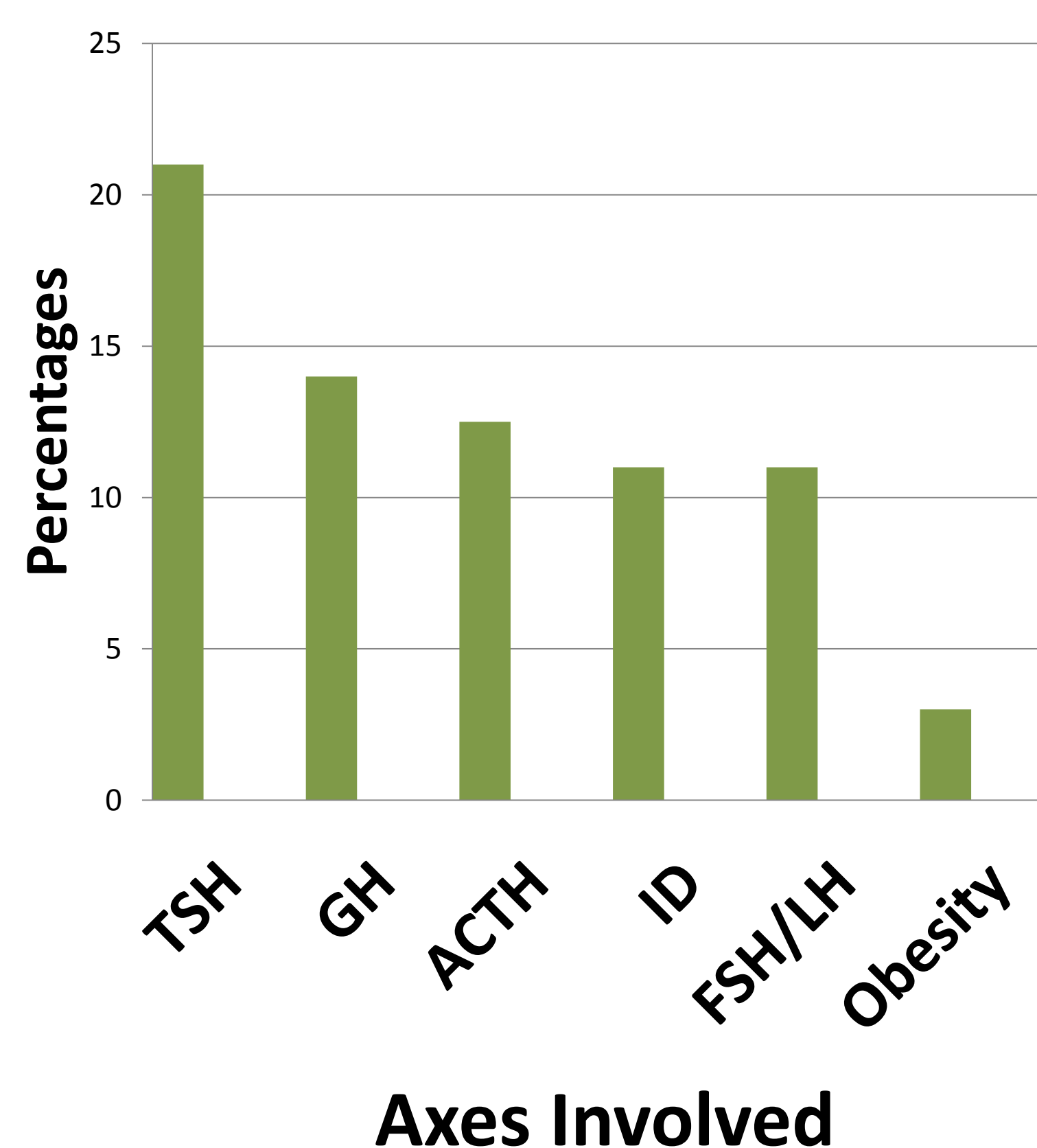
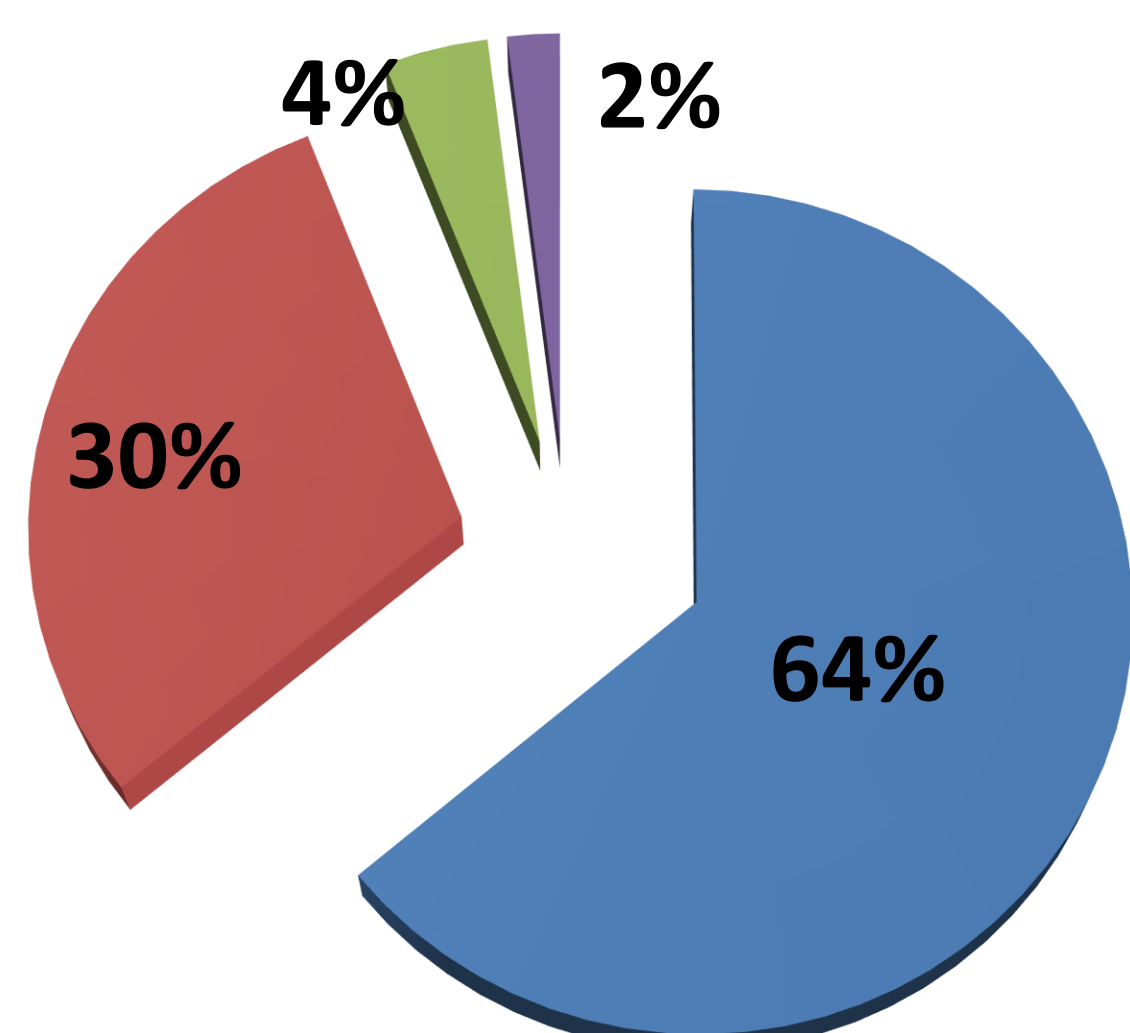
Permanent sequelae subgroup (n=17)

- 29 % have sequelae at 5 years of diagnosis.
- The **most frequent** endocrine sequel was Panhypopituitarism (64 %).
- The axes involved in descending order were: thyroid, GH, ACTH, ADH and FSH/LH.
- **Isolated GH Deficiency (n=13):** Height at 2 years after surgery was shorter than in the rest (Height-SDS: -2.5 ± 0.4 vs 1.3 ± 0.7 ; p=0.00).
- Craniopharyngioma and medulloblastoma / PNET caused 63% of the sequels.

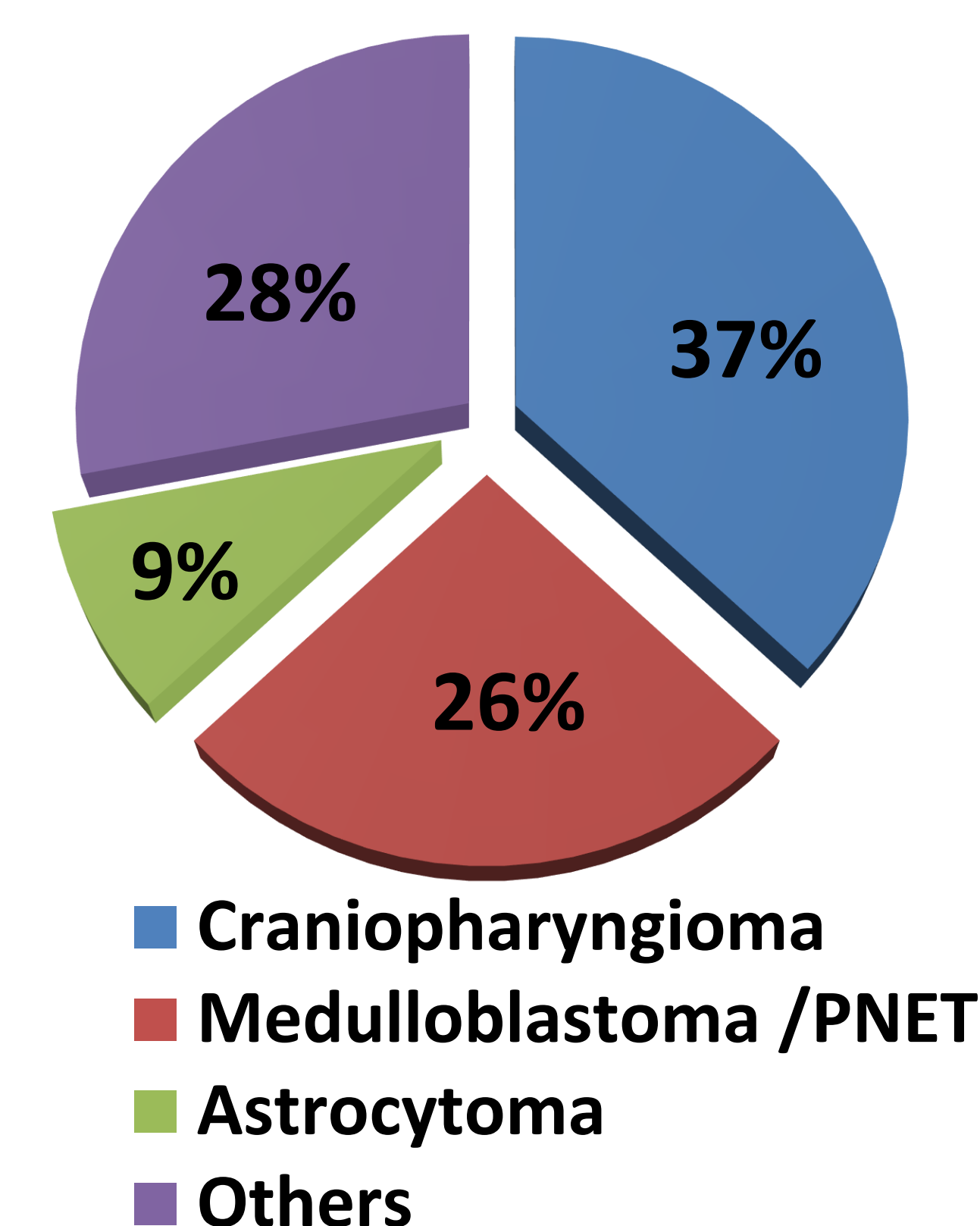
Sequels at 5 years



■ Panhypopituitarism
■ Isolated GH deficiency
■ Hypothyroidism
■ Others



Type of tumor



CONCLUSIONS

In our review, permanent endocrinological deficits were mostly influenced by location and surgery. Almost one-third develop short-term endocrine pathology. Panhypopituitarism incidence is high. Increased risk tumors are craniopharyngiomas and medulloblastomas.

Disclosure Statement: We do not have any potential conflicts of interest to declare.

