Spontaneous Intracranial Hypotension: clinical characteristics and treatment in 23 patients

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Introduction:
Spontaneous Intracranial Hypotension is caused by cerebrospinal fluid (CSF) leakage without traumatic cause in the previous month. Orthostatic headache is the most common symptom. Brain Magnetic Resonance Image (MRI) usually shows suggestive signs. The initial treatment is based on conservative measures: rest at 0 degrees, hydration and caffeine. Sometimes it is necessary to perform blood patches or surgery.

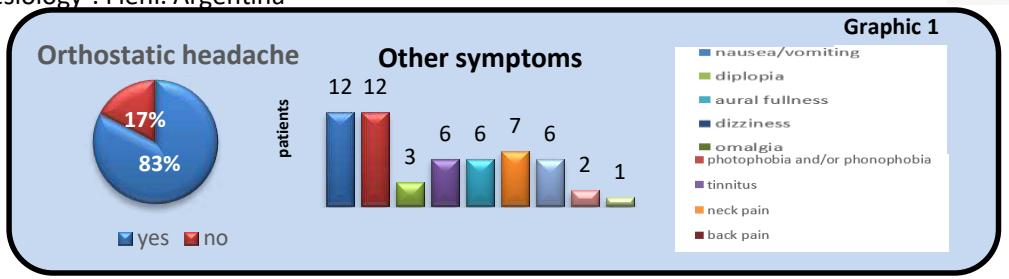
Objectives:
To analyze clinical characteristics, complementary studies and treatments performed on patients diagnosed with spontaneous intracranial hypotension in a headache service in Argentina

Materials and Methods:
Descriptive, retrospective study. We reviewed the electronic medical records of patients diagnosed with Spontaneous Intracranial Hypotension evaluated between 01/2012 and 03/2021 in our headache service. Conservative measures and rest at 0 degrees for at least 48 hours were indicated in all cases. Sex, age, type of headache, time to diagnosis, other symptoms, complementary studies, treatment and response at first and sixth month of treatment were considered.

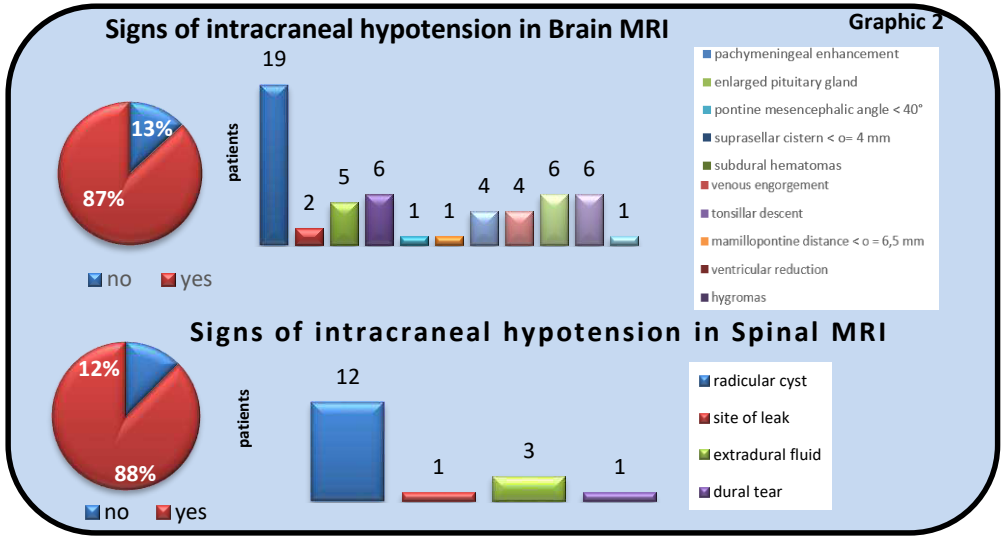
Results:
23 patients (56% women) were evaluated. Mean age was 59 years. Time to diagnosis 51 days.

- Symptoms (Graphic 1)
- Brain and Spinal MRI (Graphic 2)
- Treatment (Graphic 3)

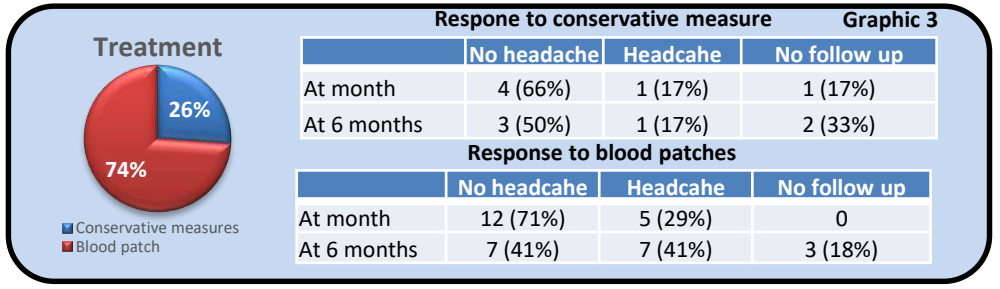
Graphic 1



Graphic 2



Graphic 3



Respone to conservative measure

	No headache	Headcahe	No follow up
At month	4 (66%)	1 (17%)	1 (17%)
At 6 months	3 (50%)	1 (17%)	2 (33%)

Response to blood patches

	No headcahe	Headcahe	No follow up
At month	12 (71%)	5 (29%)	0
At 6 months	7 (41%)	7 (41%)	3 (18%)

Conclusions:
In this cohort orthostatic headache was the most frequent symptom in Spontaneous Intracranial Hypotension, although a percentage of patients may lack it.
In most this cases brain MRI showed indirect signs, although a normal study does not exclude the diagnosis. Treatment can be challenging, as a significant proportion of patients remain symptomatic at 6 months, even after blood patching.
The delay in diagnosis decreases the chances of a successful treatment. Identifying the CSF leakage is important, since targeted treatment could be more effective.

References:
CSF hypovolemia vs intracranial hypotension in "spontaneous intracranial hypotension syndrome" K. Miyazawa, MD; Y. Shiga, MD, PhD; T. Hasegawa, MD, PhD; M. Endoh, MD, PhD; N. Okita, MD, PhD; S. Higano, MD, PhD; S. Takahashi, MD, PhD; and Y. Itoyama, MD, PhDNEUROLOGY 2003;60:941–947
Syndrome of cerebral spinal fluid hipovolemia Clinical and imaging features and outcome. Sun J. Chung, MD; Jong S. Kim, MD; and Myoung C. Lee, MD. NEUROLOGY 2000;55:1321–1327
Early epidural blood patch in spontaneous intracranial hypotension. S. Berroir, MD; B. Loisel, MD; A. Ducros, MD; M. Boukobza, MD; C. Tzourio, MD; D. Valade, MD; and M-G. Bousser, MD. NEUROLOGY 2004;63:1950–1951