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Normal pressure hydrocephalus: diagnostic delay

Hidrocefalia de presión normal: retraso diagnóstico

Normal pressure hydrocephalus

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Viviana Yepes-Gaviria y Juan Carlos Rivas: recolección de datos.

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Todos los autores analizaron e interpretación de los datos, revisaron y aprobaron el manuscrito.

Introducción. La hidrocefalia normotensa es un diagnostico diferencial en la evaluación del síndrome demencial. Los protocolos diagnósticos permitirían detectar esta patología que tiene tratamiento más efectivo que otras demencias

Objetivo. Describir una población con sospecha clínica de hidrocefalia de presión normal evaluada en un hospital psiquiátrico colombiano y discutir las posibles razones del retraso diagnóstico y terapéutico de esta entidad clínica.

Materiales y métodos. Se realizó un estudio retrospectivo de registros médicos para identificar pacientes con sospecha de hidrocefalia de presión normal durante un período de 5 años.

Resultados. A treinta y cinco pacientes con sospecha de hidrocefalia de presión normal se les realizó una punción lumbar diagnóstica. Cinco pacientes fueron considerados candidatos para una derivación ventrículo peritoneal; pero, ninguno se sometió a este procedimiento quirúrgico. Después de la punción lumbar, a corto plazo (3-6 meses), se observó una mejoría en el 22,8% de los pacientes en el patrón de la marcha, el 22,8% en la cognición y el 11,4% en el control del esfínter. La mejora no se mantuvo a largo plazo (1 año) en ningún paciente.

Conclusión. Este estudio encontró una implementación deficiente de protocolos para evaluar pacientes con déficit cognitivos, retrasos en el diagnóstico de hidrocefalia de presión normal y un pequeño número de pacientes identificados como candidatos para el tratamiento. La hidrocefalia a presión normal es una entidad clínica potencialmente reversible con la colocación de una derivación ventricular peritoneal. Los retrasos en el diagnóstico y el tratamiento tienen consecuencias perjudiciales para los pacientes y sus familias.

Palabras clave: hidrocefalia/diagnóstico; hidrocéfalo normotenso; punción lumbar; ageísmo; demencia; atención primaria de salud.

Introduction: Normotensive hydrocephalus is a differential diagnosis in the evaluation of dementia syndrome. The diagnostic protocols would allow to detect this pathology that has more effective treatment than other dementias

Objective: To describe a population with clinical suspicion of normal pressure hydrocephalus evaluated in a Colombian psychiatric hospital and to discuss the possible reasons for diagnostic and therapeutic delay of this clinical entity.

Materials and methods: A retrospective study of medical records was performed to identify patients with suspected normal pressure hydrocephalus during a 5-year period.

Results: Thirty-five patients with suspected normal pressure hydrocephalus underwent diagnostic lumbar puncture; five patients were considered candidates for a peritoneal ventricular shunt, but none underwent this surgical procedure. Following lumbar puncture, in the short term (3-6 months), improvement was observed in 22.8% of patients in gait pattern, 22.8% in cognition, and 11.4% in sphincter control. Improvement was not sustained long term (1 year) in any patients.

Conclusion: This study suggests poor implementation of protocols for evaluating patients with cognitive deficits, delays in the diagnosis of normal pressure hydrocephalus and a small number of patients identified as candidates for treatment. Normal pressure hydrocephalus is a potentially reversible clinical entity with the placement of a peritoneal ventricular shunt; delays in diagnosis and treatment have deleterious consequences for patients and their families.

Keywords: Hydrocephalus/diagnosis; hydrocephalus, normal pressure; spinal puncture; ageism; dementia; primary health care.

Normal pressure hydrocephalus (NPH) is a clinical syndrome with the triad of dementia, disordered gait, and urinary incontinence (1,2). Commonly, the disease is accompanied by frontal and subcortical cognitive deficits, which can be confused with other neurological syndromes (3,4). Ventriculomegaly with normal opening pressure on lumbar puncture is a hallmark of NPH (4). However, the symptoms and radiological findings of this disease may also be present in other common medical entities such as Parkinson's disease, Biswanger's disease, vascular dementias, and even normal aging (5-7).

The incidence of NPH varies between 1.36 and 1.58 per 100,000 persons per year (8,9), with an increased incidence in the ninth decade of life (10). The discrepancies likely reflect inconsistent definitions of NPH and differences between the study populations (11).

The diagnosis of NPH is likely when there are two symptoms of the classic triad associated with ventriculomegaly on cranial computed tomography (CT) or magnetic resonance imaging (MRI) suggesting an increase in ventricular size with signs of cerebrospinal fluid (CSF) flow (12). The reference standard to determine if a patient with NPH is a candidate for surgery is lumbar puncture (LP). The clinical improvement of the symptoms following the procedure predicts the benefit from placement of a peritoneal ventricular shunt (PVS) (13,14).

Because NPH is a dementia syndrome potentially reversible with the placement of a peritoneal ventricular shunt (PVS), it is important to characterize, recognize, and diagnose NPH accurately. Current data indicate that PVS placement is effective and early treatment can increase survival (15). However, there is little consensus

on the diagnostic criteria of this disease and the selection of patients who would potentially benefit from a PVS (16).

This study describes a population of patients with suspected NPH evaluated in a psychiatric referral center and the possible reasons for diagnostic and therapeutic delay.

Materials and methods

Population studied

We included a population of patients with clinical suspicion of NPH diagnosed between January 1, 2009, and December 31, 2014, at the Hospital Psiquiátrico Universitario del Valle (HPUV) in Cali, Colombia. Medical records were collected, and a retrospective review was performed. The study was approved by the Institutional Ethical Review Board of HPUV (Act ID 005-014).

The HPUV is an institution that specializes in the intervention of all aspects of mental health and is the center with greatest complexity in psychiatric care in southwestern Colombia.

The cases were defined as patients who presented with at least 2 symptoms of the classic NPH triad, who had brain imaging evidence of dilation of the ventricular system with an Evans index greater than 0.30 and who underwent an invasive diagnostic procedure such as an LP (17).

Lumbar punction

In the cases evaluated, a high-volume LP was performed where a large volume (typically 40-50 ml) of CSF is removed, with gait testing occurring before, 1–4 hours after, and 24 hours after the LP. Transient recovery in gait after the LP has

been considered a positive prognostic indicator for surgery. One to two LP attempts were performed and the mean opening pressure of the cerebrospinal fluid was evident in ranges of normal variation (<180mm H2O or 13mm Hg with the patient in the lateral position).

Clinical scales

The clinical symptoms of the NPH triad were assessed using the NPH scale (table 1) (19). This ordinal scale determines the severity of the patient's clinical picture using scores that independently assess the degree of impairment of gait, sphincter control, and cognition. The scores on the NPH scale range from 3-15. The minimum score of 3 corresponds to a patient who does not walk and always stays in bed or in a sitting position with incontinence of the bladder, loss of anal sphincter tone, and minimal awareness. The maximum score of 15 indicates that the patient exhibits normal gait, does not report subjective cognitive alterations, and shows normal control of sphincters.

The following data were recorded: sex, age at time of diagnosis, duration of symptoms, symptoms and severity at the time of diagnosis, response to LP, short- and long-term disease course, neuroimaging records, and associated comorbidities. Simple descriptive statistics were calculated using univariate analysis.

Results

We detected 326 records from the HPUV database under the diagnosis of hydrocephalus. Thirty-five cases (66% female) met the inclusion criteria for NPH,

and the average age at the time of evaluation was 77.3 years (range 47 - 96 years). The average follow-up time was 33.8 months (range 3-84 months). Patients with suspected NPH on admission had a generic diagnosis including senile dementia and Alzheimer's disease. The average duration of symptoms before establishing a diagnostic suspicion of NPH was 66.7 months (range 0.6-240 months). Thirty to 60% of cases presented with severe symptoms that generated a high burden of dependency on third parties (table 2).

All the selected patients had impaired gait, cognitive dysfunction, and loss of sphincter control. Of these, 11 (31%) were immobile, 22 (63%) had severe cognitive impairment, and 22 (63%) had sphincter dysfunction that required permanent assistance. All 35 patients underwent CT on admission to the hospital; of these, 4 patients also underwent MRI, and 1 underwent positron emission tomography. In all cases, ventriculomegaly was documented with an Evans index greater than 0.30. At the hospital admission examination, the Folstein Mini-Mental Scale (MMSE) was recorded in the clinical history of 12 patients, with an average score of 19/30 (range). None patients were evaluated with neurocognitive tests.

All 35 patients underwent LP; of these, 8 (22.8%) had improvement in gait in the short term (3-6 months), 8 had cognitive improvement reported by their caregivers, and 4 (11%) had improvement in sphincter control. Five patients were considered candidates for PVS placement due to overall outcomes after LP. However, none of the patients underwent this procedure: 2 patients were not considered candidates for PVS during presurgical evaluation; in 2 cases, the patients' guardians did not

give consent for the procedure; and in one case, health services did not authorize the PVS.

Discussion

This study suggests poor implementation of protocols for evaluating patients with cognitive deficits, delays in the diagnosis of normal pressure hydrocephalus and a small number of patients identified as candidates for treatment.

NPH is a reversible and potentially curable cause of dementia with effective, specific treatment. Early diagnosis can change the patient's overall prognosis and decrease the burden of the disease. The prognosis worsens the longer NPH goes untreated (15).

NPH represents a diagnostic challenge because it shares symptoms with other neurological syndromes and even aging itself. Thus, a patient can present with the classic triad of NPH and not have this disease. Ventriculomegaly is part of the suspected diagnosis but, in isolation, is not the diagnosis (20).

It is striking that the majority of cases evaluated did not have neuroimaging at the time of the first assessment in the HPUV nor was there a diagnostic study using a cognitive deficit protocol to evaluate other differential diagnoses, including other reversible demented syndromes of NPH (B12 hypovitaminosis, hypothyroidism, infectious causes, metabolic and toxic causes, etc.) (1).

It is possible that a delayed diagnosis of NPH (which implies lower possibility of reversing its symptoms) and the presence of comorbidities are related to the low rates of referral for PVS placement (15).

Our findings suggest weak adherence to diagnostic protocols to evaluate patients with cognitive deficits in primary care, leading to diagnostic and therapeutic delays in NPH. As the incidence of dementia increases substantially with the aging population, we anticipate that the consequences of late and erroneous diagnosis in dementia will represent a greater burden on public health over time (21).

It should be explored whether the lack of compliance with a protocol to evaluate patients with dementia syndromes is due to the patient's old age and the perception of irreversibility of these neurological entities (22) or if it is due to ignorance of the primary care physicians in their diagnostic approach (18). Because patients with early dementia are more likely to benefit from the intervention, future efforts to improve the timeliness of diagnosis of dementia should focus specifically on the detection of more subtle and early manifestations of the disease (23).

It is estimated that approximately half of cases of dementia remain undiagnosed (24). An important barrier among healthcare providers is the perception that providing an early diagnosis of dementia is more harmful than useful. This attitude is linked to the tendency to make a diagnosis only when an inevitable problem has occurred (18,24). Such fear is likely to be exaggerated, as studies suggest that most patients prefer full disclosure of a diagnosis of dementia (25). Early diagnosis allows optimal use of therapeutic resources and allows individuals and families to be informed and presented with appropriate coping tools and a support network that can alleviate the disabling psychological distress that caregivers may experience (13).

A systematic review has shown that delayed diagnosis of dementia syndromes is also caused by the limited resources of the healthcare system (particularly the limited time available for medical consultation, which hampers the detection and management of symptoms of dementia). Other barriers include communication problems and poor knowledge of symptoms among patients, healthcare providers, and caregivers (26). It is not acceptable, in light of the current evidence, to continue making the diagnosis of senile dementia because this implies denying the patient the possibility of receiving adequate treatment according to the etiology of the dementia.

The advantage is that these issues can be improved, and if addressed, early detection of NPH is possible. Educational measures in primary geriatric care regarding normal aging and promoting adherence to clinical practice guidelines for dementia syndromes may improve timely diagnosis and reduce stigma regarding the perception of irreversibility and therapeutic limitations (27,28).

Among the limitations of this study is the confusion bias that is implicit in the observational design. On the other hand, it is a useful design to generate hypotheses and for planning public health interventions.

Ideally, neuropsychological tests should be done before and after the evacuating lumbar puncture; however, the Colombian health plans do not assume this cost and in all the cases included in this study they were not carried out.

Conflict of interest

No conflict of interest.

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References

1. **Picascia M, Zangaglia R, Bernini S, Minafra B, Sinforiani E, Pacchetti C.** A review of cognitive impairment and differential diagnosis in idiopathic normal pressure hydrocephalus. Funct Neurol. 2015;30:217-28. https://doi.org/10.11138/FNeur/2015.30.4.217

2. **Adams RD, Fisher CM, Hakim S, Ojemann RG, Sweet WH.** Symptomatic occult hydrocephalus with "normal" cerebrospinal-fluid pressure. A treatable syndrome. N Engl J Med. 1965;273:117-26. https://doi.org/10.1056/NEJM196507152730301

3. **Iddon JL, Pickard JD, Cross JJ, Griffiths PD, Czosnyka M, Sahakian BJ.** Specific patterns of cognitive impairment in patients with idiopathic normal pressure hydrocephalus and Alzheimer's disease: a pilot study. J Neurol Neurosurg Psychiatry. 1999;67:723-32. https://doi.org/10.1136/jnnp.67.6.723

4. **Barron SA, Jacobs L, Kinkel WR**. Changes in size of normal lateral ventricles during aging determined by computerized tomography. Neurology. 1976;26:1011-3. https://doi.org/10.1212/WNL.26.11.1011

5. **Golomb J, Wisoff J, Miller DC, Boksay I, Kluger A, Weiner H, et al**. Alzheimer's disease comorbidity in normal pressure hydrocephalus: prevalence and shunt response. J Neurol Neurosurg Psychiatry. 2000;68:778-81. https://doi.org/10.1136/jnnp.68.6.778

6. **Espaillat R, Gaviria M**. Hidrocefalia de presión normal, una demencia reversible. Revista Colombiana de Psiquiatría. 2000;29:155-62.

7. **Sudarsky L, Ronthal M.** Gait disorders among elderly patients. A survey study of 50 patients. Arch Neurol. 1983;40:740-3. https://doi.org/10.1001/archneur.1983.04050110058009

8. **Pyykko OT, Nerg O, Niskasaari HM, Niskasaari T, Koivisto AM, Hiltunen M, *et al***. Incidence, comorbidities, and mortality in idiopathic normal pressure hydrocephalus. World Neurosurg. 2018;112:e624-31. https://doi.org/10.1016/j.wneu.2018.01.107

9. **Lemcke J, Stengel D, Stockhammer F, Guthoff C, Rohde V, Meier U.** Nationwide incidence of normal pressure hydrocephalus (NPH) assessed by insurance claim data in Germany. Open Neurol J. 2016;10:15-24. https://doi.org/10.2174/1874205X01610010015

10. **Aragones JM, Altimiras J, Alonso F, Roura P, Alfonso S, Bajo L**. Idiopathic normal pressure hydrocephalus: High incidence in people over 80 years of age. Rev Esp Geriatr Gerontol. 2018;53:85-8.

11. **Klassen BT, Ahlskog JE**. Normal pressure hydrocephalus: how often does the diagnosis hold water? Neurology. 2011;77:1119-25. https://doi.org/10.1212/WNL.0b013e31822f02f5

12. **Andersson J, Rosell M, Kockum K, Soderstrom L, Laurell K**. Challenges in diagnosing normal pressure hydrocephalus: Evaluation of the diagnostic guidelines. eNeurologicalSci. 2017;7:27-31. https://doi.org/10.1016/j.ensci.2017.04.002

13. **Thakur SK, Serulle Y, Miskin NP, Rusinek H, Golomb J, George AE**. Lumbar puncture test in normal pressure hydrocephalus: Does the volume of CSF removed affect the response to tap? AJNR Am J Neuroradiol. 2017;38:1456-60. https://doi.org/10.3174/ajnr.A5187

14. **Singer OC, Melber J, Hattingen E, Jurcoane A, Keil F, Neumann-Haefelin T, *et al*.** MR volumetric changes after diagnostic CSF removal in normal pressure hydrocephalus. J Neurol. 2012;259:2440-6. https://doi.org/10.1007/s00415-012-6525-3

15. **Jaraj D, Wikkelso C, Rabiei K, Marlow T, Jensen C, Östling S, *et al***. Mortality and risk of dementia in normal-pressure hydrocephalus: A population study. Alzheimers Dement. 2017;13:850-7. https://doi.org/10.1016/j.jalz.2017.01.013

16**. Krauss JK, Halve B**. Normal pressure hydrocephalus: survey on contemporary diagnostic algorithms and therapeutic decision-making in clinical practice. Acta Neurochir (Wien). 2004;146:379-88. https://doi.org/10.1007/s00701-004-0234-3

17. **Williams MA, Malm J.** Diagnosis and treatment of idiopathic normal pressure hydrocephalus. Continuum (Minneap Minn). 2016;22:579-99. https://doi.org/10.1212/CON.0000000000000305

18. **Sahuquillo J, Rubio E, Codina A, Molins A, Guitart JM, Poca MA, et al.** Reappraisal of the intracranial pressure and cerebrospinal fluid dynamics in patients with the so-called "normal pressure hydrocephalus" syndrome. Acta Neurochir (Wien). 1991;112:50-61. https://doi.org/10.1007/BF01402454

19. **Palm WM, Saczynski JS, van der Grond J, Sigurdsson S, Kjartansson O, Jonsson PV, *et al***. Ventricular dilation: association with gait and cognition. Ann Neurol. 2009;66:485-93. https://doi.org/10.1002/ana.21739

20. **Manuel DG, Garner R, Finès P, Bancej C, Flanagan W, Tu K, *et al*.** Alzheimer's and other dementias in Canada, 2011 to 2031: a microsimulation Population Health Modeling (POHEM) study of projected prevalence, health burden, health services, and caregiving use. Popul Health Metr. 2016;14:37. https://doi.org/10.1186/s12963-016-0107-z

21. **Gove D, Downs M, Vernooij-Dassen M, Small N**. Stigma and GPs' perceptions of dementia. Aging Ment Health. 2016;20:391-400. https://doi.org/10.1080/13607863.2015.1015962

22. **de Vries K, Brooker DJ, Smith P.** Dementia skills and competencies for primary care liaison: a model for improving identification and timely diagnosis. Prim Health Care Res Dev. 2013;14:240-9. https://doi.org/10.1017/S1463423612000266

23. **Brooker D, La Fontaine J, Evans S, Bray J, Saad K.** Public health guidance to facilitate timely diagnosis of dementia: ALzheimer's COoperative Valuation in Europe recommendations. Int J Geriatr Psychiatry. 2014;29:682-93. https://doi.org/10.1002/gps.4066

24. **Coebergh JA.** The difficulty and dangers of diagnosing dementia. BMJ. 2014;348:g3162. https://doi.org/10.1136/bmj.g3162

25. **Wynn MJ, Carpenter BD.** Discourse features among providers, patients, and companions and their effect on outcomes of dementia diagnosis disclosure. J

Gerontol B Psychol Sci Soc Sci. 2019;74:756-63.

https://doi.org/10.1093/geronb/gbx154

26. **Sarkar U, Simchowitz B, Bonacum D, Strull W, López A, Rotteau L, et al**. A qualitative analysis of physician perspectives on missed and delayed outpatient diagnosis: the focus on system-related factors. Jt Comm J Qual Patient Saf. 2014;40:461. https://doi.org/10.1016/S1553-7250(14)40059-X

27. **Chithiramohan A, Iliffe S, Khattak I**. Identifying barriers to diagnosing dementia following incentivisation and policy pressures: General practitioners' perspectives. Dementia (London). 2019;18:514-29.

https://doi.org/10.1177/1471301216682625

28. **Bennett CE, De Boos D, Moghaddam NG**. Developing a tool to support diagnostic delivery of dementia. Dementia (London). 2019;18:2505-25

https://doi.org/10.1177/1471301217750936

Table 1. Clinical scale for idiopathic normal pressure hydrocephalus (18)

Symptoms	**Score**
Gait evaluation	
Patien in bedridden or not able to ambulate	1
Ambulation is posible with help	2
Independent walking is posible but unstable or the patient falls	3
Abnormal but estable gait	4
Normal gait	5
Cognitive function	
Patient is vegetative	1
Severe dementia	2
Important memory problems with more or less severe behaviour disturbance	3
Memory problems reported by patient or family	4
Cognitive disturbances are only found by specific tests	5
Sphincter disturbances	
Urinary and faecal incontinence	1
Continous urinary incontinence	2
Sporadic urinary incontinence	3
Urinary urgency	4
No objetive or subjetive sphincter disfuntion	5

Total NPH score = gait evaluation + cognitive function score + sphincter disturbance score

Table 2. Characterization of patients with clinical suspicion of idiopathic normal pressure hydrocephalus

Case	Sex	Age (years)	Sym-ptoms duration (months)	Baseline symptoms			Gait outcomes		Cognitive decline		Urinary incontinence	
				Gait distur-bance	Cognitive decline	Urinary inconti-nence	Short term (3-6 months)	Long term (3 years)	Short term (3-6 months)	Long term (3 years)	Short term (3-6 months)	Long term (3 years)
1	M	70	48	1	3	2	1	1	3	1	2	1
2	F	75	24	3	3	1	4	2	4	2	4	1
3	F	73	36	3	3	4	3	3	3	3	4	4
4	M	66	24	4	2	2	2	1	2	1	2	1
5	F	78	108	4	2	1	4	3	2	2	1	1
6*	F	62	96	2	3	1	3	2	3	3	3	1
7*	F	79	216	3	2	4	4	3	3	1	4	1
8	F	84	1	3	3	4	4	2	4	2	4	4
9	M	74	72	3	3	1	3	2	2	2	1	1
10*	M	78	60	1	3	1	2	1	3	3	2	1
11	M	78	72	1	2	1	1	1	2	2	1	1
12	F	83	240	1	2	1	1	1	2	2	1	1
13	F	81	36	1	2	1	1	1	3	2	1	1
14	F	89	72	1	2	1	3	1	3	2	3	1
15	F	76	72	3	2	2	1	1	1	1	2	2
16	M	74	72	3	3	1	2	2	2	2	1	1
17*	M	47	240	3	3	3	3	3	3	3	3	1
18	F	82	24	4	2	2	4	4	2	1	2	1
19	M	85	48	4	3	4	4	4	2	2	4	3
20	F	65	84	4	2	3	4	3	2	2	3	3
21	F	87	60	2	2	3	2	1	4	2	3	3
22	F	96	180	2	2	1	2	2	2	2	1	1
23	F	63	36	4	2	1	4	(-)	2	(-)	1	(-)
24	F	84	144	3	2	1	2	2	1	1	1	1
25	F	79	12	3	2	1	3	3	2	2	1	1
26	M	73	24	3	2	2	3	3	2	1	2	2
27	F	81	24	3	2	3	3	0	2	(-)	3	(-)
28	F	82	0,6	4	4	4	4	0	3	(-)	4	(-)
29*	M	76	180	3	3	3	4	3	3	3	4	3
30	M	79	12	3	2	1	3	3	2	2	1	1

31	F	79	6	2	2	1	3	(-)	2	(-)	1	(-)
32	F	93	1,44	3	2	3	3	3	2	2	3	3
33	M	80	24	1	2	1	1	(-)	3	(-)	1	(-)
34	F	77	18	3	3	3	3	3	3	3	3	3
35*	F	79	1	3	2	3	3	3	3	3	3	3

2