

Table 2 – Results Before (pre) and After (Post) Subchronic Stimulation Measured With the EuroQol 5D and VAS for Pain.

	Mobility		Personal care		Daily activities		Pain/discomfort		Anxiety/depression		Health state		Pain (EVA 1–10)	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Patient 1	1	1	1	1	2	2	3	2	2	1	40	70	10	5
Patient 2	1	1	1	1	1	1	3	1	3	2	32	55	9	4
Patient 3	1	1	1	1	2	2	3	3	3	3	30	30	9	9

Treatment with SNS is effective in some patients with severe chronic anal pain. Some authors have demonstrated its cost-effectiveness because of the lower number of treatments, medical visits and sick leaves from work required by these patients.¹⁰ We believe that patients should first be studied in detail to rule out any other treatable pathology, which might resolve the cause of the pain. In those patients with no clear etiology in whom medical treatments have failed, SNS can be used empirically and, if its effectiveness is demonstrated by the use of pain scales and quality-of-life studies, the definitive stimulator should be implanted.

REFERENCES

1. Grimaud J-C, Bouvier M, Naudy B, Guien C, Salducci J. Manometric and radiologic investigations and biofeed-back treatment of chronic idiopathic anal pain. *Dis Colon Rectum*. 1991;34:690–5.
2. Kamm MA, Hoyle CH, Burleigh DE, Law PJ, Swash M, Martin JE, et al. Hereditary internal anal sphincter myopathy causing proctalgia fugax and constipation. *Gastroenterology*. 1991;100:805–10.
3. Ger GC, Wexner SD, Jorge JM, Lee E, Amaranath LA, Heymen S, et al. Evaluation and treatment of chronic intractable rectal pain Y a frustrating endeavor. *Dis Colon Rectum*. 1993;36:139–45.
4. Pedersen IK, Christiansen J. A study of the physiological variation in anal manometry. *Br J Surg*. 1989;76:69–70.
5. Gorfine SR. Treatment of benign anal disease with topical nitroglycerine. *Dis Colon Rectum*. 1995;38:453–7.
6. Dudding TC, Vaizey CJ, Jarrett ME, Cohen RG, Kamm MA. Permanent sacral nerve stimulation for treatment of functional anorectal pain: report of a case. *Dis Colon Rectum*. 2007;50:1275–8.
7. Falletto E, Masin A, Lolli P, Villani R, Ganio E, Ripetti V, et al., GINS (Italian Group for Sacral Neuromodulation). Is sacral nerve stimulation an effective treatment for chronic idiopathic anal pain? *Dis Colon Rectum*. 2009;52:456–62.
8. Soria-Aledo V, Mengual-Ballester M, Pellicer-Franco E, Aguayo-Albasini JL. Improvement in the quality of life of faecal incontinent patients after sacral root stimulation treatment. *Cir Esp*. 2011;89:581–7.
9. Badia X, Schiaffino A, Alonso J, et al. Using the EuroQol 5-D in the Catalan general population: feasibility and construct validity. *Qual Life Res*. 1998;7:311–22.
10. Mekhail NA, Aeschbach A, Stanton-Hicks M. Cost benefit analysis of neurostimulation for chronic pain. *Clin J Pain*. 2004;20:462–8.

Víctor Soria-Aledo^{a,*}, Enrique Pellicer-Franco^a,
Mónica Mengual-Ballester^a, Graciela Valero-Navarro^a,
José Luis Aguayo-Albasini^b

^aUnidad de Coloproctología, Servicio Cirugía General y del Aparato Digestivo, Hospital J.M. Morales Meseguer, Murcia, Spain

^bServicio Cirugía General y Aparato Digestivo, Hospital J.M. Morales Meseguer, Murcia, Spain

*Corresponding author.

E-mail address: victoriano.soria@carm.es (V. Soria-Aledo).

2173-5077/\$ – see front matter

© 2011 AEC. Published by Elsevier España, S.L. All rights reserved.

Mesenteric Hepatic Portal Pneumatosis: Is It Always an Ominous Diagnosis?

Neumatosis portal-hepática-mesentérica, ¿es siempre un diagnóstico ominoso?

Portal venous gas is a radiological sign that up until a few years ago was associated with evolved stages of intestinal ischemia and a tragic prognosis. However, more and more authors have been reporting cases of portal venous gas

associated with acute inflammatory processes with survival rates of 70%–80%.^{1,2}

We present the case of a 62-year-old male with a history of hypertension. He came to the Emergency Department after an

* Please cite this article as: Garcés Albir M, López Mozos F, Martí Cuñat E, Martí Obiol R, Ortega Serrano J. Neumatosis portal-hepática-mesentérica, ¿es siempre un diagnóstico ominoso? *Cir Esp*. 2014;92:65–67.



Fig. 1 – Abdominal-pelvic CT scan with intravenous contrast: hepatic portal venous gas.

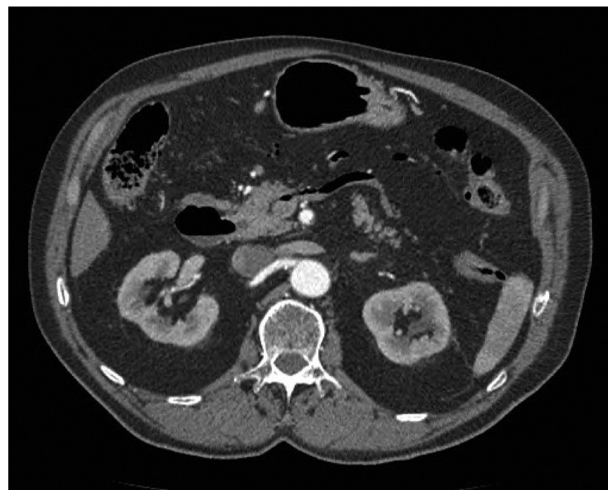


Fig. 2 – Abdominal-pelvic CT scan with intravenous contrast: extensive air level is observed at the splenic vein.

episode of abrupt central chest pain, hypotension and having fallen to the ground without loss of consciousness. Physical examination revealed pale mucous membranes, sweating, blood pressure 65/45 mmHg and a heart rate of 34 beats per minute in sinus rhythm. He presented a protruding abdomen with no signs of peritoneal irritation. After stabilizing the patient, and given the suspicion of aortic dissection, we quickly decided to perform a thoracoabdominal-pelvic computed tomography (CT) scan with intravenous contrast, which showed extensive portal venous gas, with gas in the inferior mesenteric and splenic veins, and no other justifiable findings (Figs. 1 and 2). Blood test results (hematology, biochemistry, coagulation) were non-significant. Due to the discrepancy between the symptoms and radiology results, a meticulous exploratory laparoscopy was carried out, which showed no evidence of any cause that would explain the presence of gas in the portal venous system. The patient was admitted for further monitoring and remained asymptomatic throughout his hospital stay. He was discharged 72 h later after another abdominal-pelvic CT that demonstrated no relevant findings. After 6 months of follow-up, the patient remains asymptomatic.

Portal venous gas is a radiological sign with numerous etiologies. It has been described in association with vascular pathology, infections, hollow viscus perforation, abdominal trauma and inflammatory diseases, or secondary to endoscopic studies, chemotherapy, drug use, etc.^{2,3} The pathophysiology of this finding is not well understood. Factors that are supposedly related with the appearance of gas in the portal venous system are: gas leak caused by certain gas-producing microorganisms in the intestinal lumen or in abscesses, or the presence of these microorganisms in the portal venous system.³

The diagnosis of portal venous gas has increased in recent years due to the growing number of radiological examinations performed and their greater sensitivity. CT is the radiological test of choice because it can diagnose the underlying cause and direct treatment.^{4,5}

In the last few years, several authors have attempted to create management algorithms for portal venous gas in order to avoid unnecessary laparotomies and achieve more efficient treatment. In short, we could say that the objective is to determine whether the underlying cause is a pathology that requires emergency surgery (intestinal ischemia, peritonitis, etc.), a reversible cause (intra-abdominal abscess, inflammatory disease, gastroenteritis, etc.) or an incidental finding. In the former instance, in addition to the radiological sign of portal venous gas, the patient will have signs of sepsis, and mortality can reach 80%–90%. However, when it is an incidental finding, which is a diagnosis that is reached after having ruled out all other possible causes of portal venous gas, mortality is 0%.^{6–9} In this case, and considering the possible pathophysiology of portal venous gas, it would seem advisable to use prophylactic antibiotics. However, there are no studies recommending their generalized use.

Therefore, it is important to make a proper differential diagnosis of the presence of gas in the portal venous system and to rule out causes requiring emergency surgical treatment as soon as possible. Do not forget that it may be a chance finding that requires no specific therapy.

REFERENCES

- Chien-Hua L, Jyh-Cherng Y, Huan-Fa H, Hurng-Sheng W, Shih-Yi C, Chu-Hsin C. Pneumatosis intestinalis and hepatic-portal-mesenteric venous gas in intestinal ischemia. *Rev Esp Enferm Dig.* 2007;99:96–9.
- Mancebo A, Álvarez-Hornia E, Rodríguez-Peláez M, Ibáñez M, Luyando LM, Varela M. Indolent evolution of an episode of acute gastroenteritis complicated with portal pneumatosis. *Rev Esp Enferm Dig.* 2010;102:557–9.
- Abboud B, El Hachem J, Yazbeck T, Doumit C. Hepatic portal venous gas: physiopathology, etiology, pronosis and treatment. *World J Gastroenterol.* 2009;15:3585–90.

4. Monneuse O, Pilleul F, Barth X, Gruner L, Allaouchiche B, Valette PJ, et al. Portal venous gas detected on computed tomography in emergency situations: surgery is still necessary. *World J Surg.* 2007;33:1179-83.
5. Duron VP, Rutigliano S, Machan JT, Dupuy DE, Mazzaglia PJ. Computed tomographic diagnosis of pneumatosis intestinalis: clinical measures predictive of the need for surgical intervention. *Arch Surg.* 2011;146:506-10.
6. Pastor C, Cienfuegos JA, Bueno A, Pedano N, Martinez P, Baixauli J. Réplica: significado clínico de la neumatosi portal. *Rev Esp Enferm Dig.* 2011;103:107-8.
7. Morris MS, Gee AC, Cho SD, Limbaugh K, Underwood S, Ham B, et al. Management and outcome of pneumatosis intestinalis. *Am J Surg.* 2008;195:679-83.
8. Wayne E, Ough M, Wu A, Liao J, Andresen KJ, Kuehn D, et al. Management algorithm for pneumatosis intestinalis and portal venous gas: treatment and outcome of 88 consecutive cases. *J Gastrointest Surg.* 2010;14:437-48.
9. Nelson AL, Millington TM, Sahani D, Chung RT, Bauer C, Hertl M, et al. Hepatic portal venous gas: the ABCs of management. *Arch Surg.* 2009;144:575-81.

Marina Garcés Albir*, Fernando López Mozos,
Elena Martí Cuñat, Roberto Martí Obiol, Joaquín Ortega Serrano

Servicio de Cirugía General y del Aparato Digestivo, Hospital Clínico Universitario de Valencia, Valencia, Spain

*Corresponding author.

E-mail address: garalma@hotmail.com (M. Garcés Albir).

2173-5077/\$ – see front matter

© 2014 AEC. Published by Elsevier España, S.L. All rights reserved.