

PYLORIC STENOSIS SYNDROME: CASE REPORT

Eliane Camargo de Jesus

Ana Carolina Werneck Barros

Ailton Bruno de Moura Gonçalves

Taynara Fraga da Silva

Thalis Limonge de Oliveira Monteiro

Glenda Mirela Ferreira Souto

All content in this magazine is licensed under a Creative Commons Attribution License. Attribution-Non-Commercial-Non-Derivatives 4.0 International (CC BY-NC-ND 4.0).



Abstract: Pyloric stenosis is a condition in which there is a narrowing of the lumen of the gastrointestinal tract in this region, leading to a picture of upper intestinal obstruction. Among its causes, neoplasms stand out, with adenocarcinoma of the head of the pancreas being one of them. The present study will report the case of a patient admitted to the emergency department with abdominal pain, nausea and vomiting, who was diagnosed with pyloric stenosis from the results of abdominal tomography and upper digestive endoscopy. Subsequently, he underwent an exploratory laparotomy to elucidate the etiology and treat the obstruction. During the intraoperative period, a large lesion in the pancreatic head and in the retroperitoneum was observed, and material was removed for histopathological analysis. A latero-lateral gastro-jejunal gastroenteroanastomosis and a gastrostomy were also performed.

Keywords: Pyloric stenosis; bowel obstruction; pancreatic head adenocarcinoma; laparotomy.

INTRODUCTION

The pyloric sphincter consists of rings of smooth muscle maintained in a continuous state of contraction, separating two specialized compartments of the digestive tract. Stenosis of this portion occurs when there is a narrowing of the lumen, leading to a symptomatic picture characterized by epigastric pain, postprandial fullness, nausea, vomiting, weight loss, among others. In adults, its most common cause is the healing of peptic ulcers, which, from the formation of fibrosis, causes an increase in the wall and closure of the intestinal lumen (FIGUEIREDO et al, 2003).

The stenosis to be discussed in this case report is mechanical, less frequent, caused by irregular cell growth. According to Navarret et al (2001), the tumor growth in parts of the intestine can invariably cause its obstruction, however, the insidious evolution and the non-

specific clinic make the diagnosis difficult, which is often only made after clinical investigation due to complications such as stenosis, hemorrhage or during the surgical act.

Pyloric stenosis syndrome, caused by probable adenocarcinoma, is a serious condition with low prevalence, compared to peptic etiology. Therefore, early recognition of symptoms is necessary to carry out the differential diagnosis with other benign diseases in the shortest possible time. Therefore, the present report is relevant to contribute to the literary support on the subject (REALES et al, 2016).

CASE REPORT

Male patient, 56 years old, Caucasian, born and resident of Volta Redonda - RJ, admitted to the emergency department with diffuse abdominal pain, nausea and vomiting after eating and early satiety starting two weeks ago. A long-time hypertensive smoker and alcoholic patient who was irregularly using Hydrochlorothiazide 500 mg 1x/day. On physical examination, he was lucid and oriented, pale, dehydrated, anicteric, afebrile, eupneic on room air and with a diffusely painful abdomen on superficial and deep palpation. Blood pressure: 90 x 70 mmHg. Heart rate: 90 bpm. No changes in the rest of the physical examination. Admission tests showed leukocytes 23,800/mm; amylase 102 U/L; lipase 137 U/L; urea 254 mg/dL; creatinine 8.0 mg/dL; sodium 134 mEq/L; potassium 2.6 mEq/L; chlorides 73 mEq/L; C-reactive protein 6 mg/L. The patient was admitted to the hospital for initial management of the condition, where, at first, hydroelectrolytic correction and hemodialysis were prioritized after the suspicion of acute chronic kidney disease was raised. The diagnostic investigation was then carried out with a computed tomography of the abdomen

with venous contrast that showed marked gastric dilatation and an upper digestive endoscopy that confirmed the pyloric stenosis and found nodular mucosal lesions in this region.

After the results of the imaging tests, the hypothesis of a pyloric obstruction secondary to the neoplasm was elaborated. This fact, associated with the evolution of the patient's condition, with worsening of the symptoms of upper intestinal obstruction, led to the decision to perform an exploratory laparotomy. During the intraoperative period, no fluid, pus or feces were seen in the abdominal cavity, after sectioning the gastrocolic ligament and accessing the retroperitoneum, a large lesion was identified in the pancreatic head and in the retroperitoneum near the angle of treitz, and material was removed for histopathological analysis, not point of stenosis of the jejunal and ileal loops was evidenced. A latero-lateral gastro-jejunal gastroenteroanastomosis and a gastrostomy were also performed.

The patient evolved satisfactorily in the postoperative period, being discharged on the 25th day of hospitalization with an appointment to return to a general surgery outpatient clinic. The anatomopathological report of a lesion in the retroperitoneum showed a small cell neoplasm, with proliferation of small cells with scarce cytoplasm and slightly irregular nuclei.

DISCUSSION

The case portrayed represents a 56-year-old male patient with pyloric stenosis, with upper intestinal obstruction due to probable adenocarcinoma of the head of the pancreas. This case differs from the literature, which highlights that the etiology of most pyloric obstructions in adults is peptic ulcer disease (GARRITANO et al, 2013).

The patient in question is admitted to the emergency department with a nonspecific

complaint of abdominal pain associated with symptoms of gastrointestinal obstruction, and is then hospitalized for diagnostic elucidation and symptom control. According to Dani; Passos (2011), abdominal pain represents one of the most frequent and difficult problems that health professionals deal with in their practice. In this group, pain secondary to intestinal obstruction stands out as one of the most routine challenges due to its high incidence, ranking second among non-traumatic abdominal surgical pathologies in emergency services.

After the clinical stabilization of the patient, the investigation was carried out with an abdominal computed tomography. The examination identified gastric distention, supporting the diagnosis of upper intestinal obstruction due to possible pyloric stenosis. Although tomography is considered a complementary exam that would help in identifying the cause of the stenosis, the result of the exam in question was not able to discern the exact nature of the lesion (GARRITANO et al, 2013).

The diagnosis of pyloric stenosis was confirmed after performing upper digestive endoscopy, the main method for this (GARRITANO et al, 2013). It allowed a good visualization of the stenosis, exclusion of peptic ulcers and the discovery of findings suggestive of neoplasia with collection of lesion material for histopathological analysis.

In the above case, due to the fact that the patient was very symptomatic and presented clinical signs and findings suggestive of neoplasia, it was decided to perform an exploratory laparotomy, which identified a large lesion in the pancreatic head and a lesion in the retroperitoneum. From then on, the diagnostic hypothesis of adenocarcinoma of the head of the pancreas as the cause of pyloric stenosis became the most accepted. During laparotomy, a latero-lateral

gastroenteroanastomosis was also performed and material from the lesion was collected for histopathological analysis. The surgical approach chosen, both for diagnosis and therapy, is in accordance with what has been reported by other authors, who advocate its use as it allows for a more accurate histological confirmation and relief of symptoms (HELLAN; LEE; LERNER, 2006; ZARINEH et al, 2010; BOULES et al, 2014).

When analyzing the congruence between the patient's profile and the risk factors for adenocarcinoma of the head of the pancreas, long-term smoking stands out. Smokers are five times more likely to develop the disease than non-smokers and, depending on the amount and time of consumption, this risk becomes even greater (RUMANCIK et al, 1984). Diabetes or glucose intolerance were observed in 80% of patients with pancreatic adenocarcinoma, however, contrary to this data, the patient studied did not present these comorbidities (WANG et al, 2003).

The profile of the patient in question differs from what was expected when analyzing the other risk factors found in the literature. Advanced age is a relevant factor recorded, with 80% of pancreatic adenomas occurring between 60 and 80 years of age. Despite this, the patient is below this age group, 56 years old. He also differs from the literature because he is Caucasian, since the Afro-descendant ethnicity contributes twice as much to the emergence of this tumor (SCHNEIDER; SCHMID, 2003).

Pancreatic tumors are not commonly considered a probable obstructive cause, thus slowing the identification of the disease. Added to this is the fact that the symptoms are too non-specific – weight loss, nausea, vomiting, anorexia, abdominal pain and anemia – and can also be found in other more recurrent diseases. In general, the diagnosis is made after the appearance of complications

or only during the surgical procedure, which was what happened in the case presented (GARRITANO et al, 2013).

It must be noted that the therapeutic decision must be individualized, analyzing the risks of the surgical approach and radiological surveillance with the patient's preference, presence of comorbidities, age, life expectancy and quality of life (QUILICI et al, 2019).

The diagnosis of adenocarcinoma of the head of the pancreas can only be confirmed after histopathological analysis. Only then will it be possible to start planning for the next procedures, allowing the best possible way to handle the case. The biopsy performed on a lesion in the retroperitoneum showed a small cell neoplasm, with proliferation of small cells with scant cytoplasm and slightly irregular nuclei. Outpatient follow-up was carried out, and the patient is progressing well. (QUILICI et al, 2019).

FINAL CONSIDERATIONS

This study demonstrates the importance of an adequate diagnosis of pyloric stenosis, as well as an early etiological investigation. It also illustrates the possible delay in its diagnosis, since the most common signs and symptoms include a wide clinical spectrum, requiring a differential diagnosis between the main causes, such as peptic ulcer disease, diabetic gastroparesis and neoplasms. In this context, the importance of imaging tests, such as upper digestive endoscopy and computed tomography, is highlighted.

Finally, it is important to emphasize the importance of individualized therapeutic decision, analyzing the risks of the surgical approach and radiological surveillance with the patient's preference, presence of comorbidities, age, life expectancy and quality of life.

REFERENCES

- BOULES, M.; CORCELLES, R.; BATAYYAH, E.; RODRÍGUEZ, J.; KROH, M. Adult idiopathic hypertrophic pyloric stenosis. **CRSLS**. 2014:00252.
- DANI, R.; PASSOS, M. C. **Gastroenterologia Essencial**. 4. ed. Rio de Janeiro: Grupo GEN, 2011.
- GARRITANO, C. R. O. et al. Tumor de piloro. Apresentação de caso. **Rev. col. bras. cir.** v. 40, n. 5, 2013.
- HELLAN, M.; LEE, T.; LERNER, T. Diagnosis and therapy of primary hypertrophic pyloric stenosis in adults: case report and review of literature. **Journal of Gastrointestinal Surgery**. v. 10, n. 2, p. 265-269, 2006.
- HULKA, F.; CAMPBELL, T. J.; CAMPBELL, J. R.; HARRISON, M. W.; Evolution in the recognition of infantile hypertrophic pyloric stenosis. **Pediatrics**. v.100, n. 2, 1997.
- NAVARRETE, S. et al. Adenocarcinoma primario no ampullar de duodeno: reporte de caso y revisión de la literatura. **Rev. venez. oncol.** v. 13, n. 3, p. 104-7, 2001.
- QUILLICI, F. A.; SANTANA, N. P.; GALVÃO-ALVES, J. **A gastroenterologia no século XXI: manual do residente da Federação Brasileira de Gastroenterologia**. Barueri: Editora Manole, 2019.
- REALES, V. J. A.; MORENO, C. Q.; VELANDIA, C. S.; ÁNGEL, N. P.; ROMERO, K. R. Estenosis pilórica del adulto, a propósito del primer caso registrado en Colombia. **Rev. colomb. radiol.** v. 27, n. 3, p. 4512-15, 2016.
- RUMANCIK, W.M.; MEGIBOW, A.J.; BOSNIAK, M.A.; HILTON, S. Metastatic disease to the pancreas evaluation by computed tomography. **JCAT**. v. 8, p.829-34, 1984.
- SCHNEIDER, G.; SCHMID, R. M. Genetic alterations in pancreatic carcinoma. **Mol. cancer**. v. 2, p.15, 2003.
- WANG, F.; HERRINGTON, M.; LARSSON, J.; PERMERT, J. The relationship between diabetes and pancreatic cancer. **Mol. cancer**. v. 2, n. 4, 2003.
- ZARINEH, A.; LEON, M. E.; SAAD, R. S.; SILVERMAN, J. F. Idiopathic hypertrophic pyloric stenosis in an adult, a potential mimic of gastric carcinoma. **Patholog. res. int.** 2010:614280.