

Recurrent Severe Pancreatitis Revealing Major Hypertriglyceridemia

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Abstract: Acute pancreatitis (AP) is a real diagnostic and therapeutic emergency that can be life threatening. Recurrent acute pancreatitis (RAP) is defined as the occurrence of at least two separate episodes of AP.

Hypertriglyceridemia is the cause of AP in 7 to 9% of cases but is often forgotten and rarely mentioned by health professionals, especially in emergency rooms. Hypertriglyceridemia-induced AP is favored by secondary risk factors such as: obesity, diabetes mellitus, heavy alcohol consumption, medications, and pregnancy, and is only rarely recurrent (3 -5%).

We report the original observation of severe and recurrent AP (four episodes) caused by isolated major hypertriglyceridemia in a 47-year-old Tunisian woman without any other secondary risk factor.

Keywords: pancreatitis, hypertriglyceridemia, recurrent pancreatitis.

1. INTRODUCTION

Acute pancreatitis (AP) is a real diagnostic and therapeutic emergency that can be life-threatening [1]. The main etiologies of AP are: gallstones, heavy alcohol consumption, drugs, autoimmune diseases, hypercalcemia, pancreas divisum, and genetic causes [2]. In 10-30% of cases, the etiology remains undetermined defining idiopathic AP [1, 2].

Yet well-established, hypertriglyceridemia remains an unusual and often overlooked etiology of AP [3,4]. Hypertriglyceridemia-induced AP is distinguished by a higher rate of local complication and significant morbidity and mortality [3,4]. The risk and severity of AP is correlated with levels of serum triglycerides [3,4].

Thus, it seems crucial for any healthcare professional, especially those working in the emergency room, to well know this a etiology in order to identify it as the cause of AP and establish an adapted treatment plan without delay [3,4]. Only these conditions are the guarantees of a good outcome of this disease [1, 2].

We report the original observation of severe and recurrent AP caused by major hypertriglyceridemia in a young woman.

2. CASE REPORT

A 47-year-old Tunisian woman, without pathological medical history, was explored for recurrent acute pancreatitis. Indeed she had presented four episodes of AP between 2011 and 2018 including two severe episodes (grade E of Balthazar). The outcome was favorable in all cases with symptomatic medical treatment.

The etiological investigations had eliminated a biliary, alcoholic, mal formative, or drug etiology. She was referred to us during her fourth episode of AP for etiological diagnosis.

The somatic examination noted an a pyretic patient, well aware and oriented, and without obvious motor or sensitive deficit. The abdomen was little distended and slightly painful on palpation. Cardiac and respiratory statuses were conserved.

There have been no reports of abdominal trauma, toxic substances or alcohol abuse, or medication that potentially causes pancreatitis.

Biology showed a disturbance of the pancreatic enzymes: lipase at 919 IU/l and amylase at 356 IU/l. Abdominal ultrasound and computed tomography confirmed the diagnosis of Balthazar grade B acute pancreatitis (Figures 1 and 2). The electrocardiogram, chest X-ray, cardiac ultrasound, and chest CT-scan were free of abnormalities.

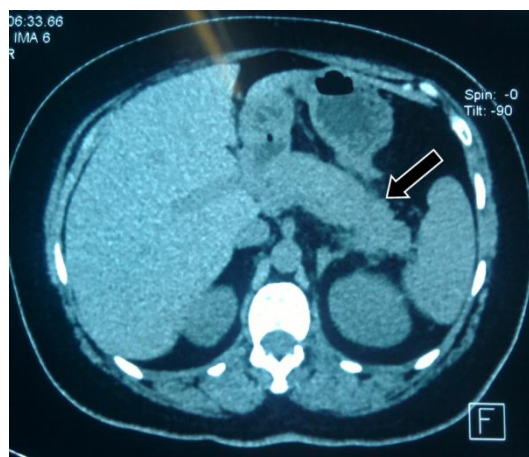


Fig1. Abdominal CT-scan without injection: overall and homogeneous swelling of the pancreas (grade B acute pancreatitis).

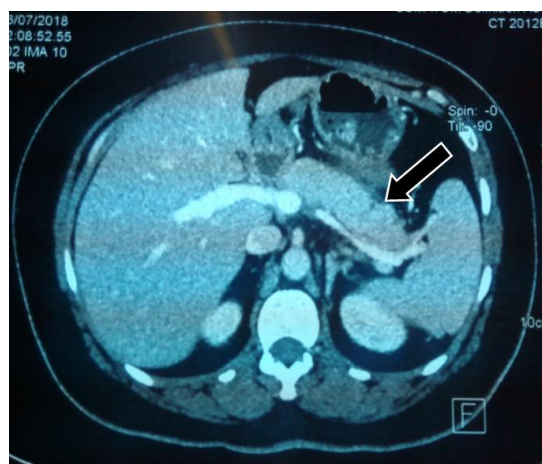


Fig2. Abdominal CT with contrast injection: overall and homogeneous swelling of the pancreas without enhancement (grade B acute pancreatitis).

The study of lipid parameters concluded to isolated major hypertriglyceridemia with triglycerides at 25 mmol/l (0.5-1.70).

The other explorations were without abnormalities: total blood count, calcemia, fasting glycemia, postprandial glycemia, creatinine, transaminases, muscular enzymes, uric acid, plasma ionogram, erythrocyte sedimentation rate, C-reactive protein, thyroid tests, and electrophoresis of serum proteins. Similarly, screening for autoimmune and connective tissue diseases was negative

The diagnosis of hypertriglyceridemia-induced RAP was retained.

In addition to the non-specific symptomatic management of AP, the patient was treated with rosuvastatin 20mg/d, then 40mg/d, then by the association rosuvastatin 40mg/d and fenofibrate 160mg/d with favorable outcome.

His triglyceride level was lowered to 1.82 mmol/l and no AP recurrence has been noted for three years.

3. DISCUSSION

Although the incidence of PA has increased significantly in recent years [5], this digestive emergency remains relatively rare; its incidence is estimated at 15 to 45 per 100,000 per year [2]. In most cases, APs are mild. Moderately severe APs (defined as pancreatic local complication) are rare, and severe APs (defined as persistent organ failure) are exceptional [5,6].

Used first by Doubilet H in 1948, the term of recurrent acute pancreatitis (RAP) was defined by the first Marseilles symposium in 1963 as “the occurrence of at least two separate documented episodes of AP with a period of resolution in between, and the absence of definitive changes of chronic pancreatitis” [8]. RAPs are rare and the rate of recurrence after a first-attack of AP is estimated at 8-10 per 100,000 per year in the general population [2].

Hypertriglyceridemia is the cause of AP in 7 to 9% of cases [4,9]. It is often forgotten and rarely mentioned, especially in emergency rooms, by health professionals [3,4,10]. Indeed, systematic review of the English literature by Carr RA et

al, demonstrated that patients with hypertriglyceridemia have a significantly increased incidence and prevalence of PA (14%) compared to the general population [9].

Like severity, the risk of AP occurring is correlated with the level of serum triglycerides [2-4] and severe hypertriglyceridemia with a triglyceride level ≥ 1000 mg/dL are the main providers of this complication [2,10]. APs can, however, occur at any level of triglycerides [2].

Regardless of the triglyceride level, the occurrence of AP in patients with hypertriglyceridemia is favored by the presence of associated risk factors such as: obesity, diabetes mellitus, heavy alcohol consumption, medications, and pregnancy [2-4].

Compared to alcoholic, biliary, and idiopathic APs where the risk of recurrence is estimated at 25-50%, 10-30%, and 10-30% respectively, hypertriglyceridemia-induced AP is only rarely recurrent (3 -5%) [2]. Hypertriglyceridemia-induced RAP seems to be correlated to younger age, alcohol abuse, and increased triglyceride levels [10].

The management of hypertriglyceridemia-induced AP is based on the same general principles as that of AP of other etiologies. However, treatment that rapidly and durably lowers triglycerides is mandatory [3-6,9,10,11]. In severe forms of this disease, plasmapheresis appears to improve the prognosis [11,12].

4. CONCLUSION

Hypertriglyceridemia deserves to be known as the etiology of AP by any healthcare professional, especially those practicing in emergency rooms. This better knowledge will avoid unnecessary exploration and delay in management.

Our observation is distinguished by its occurrence without other secondary risk factors, and by its recurrent character.

REFERENCES

- [1] James TW, Crockett SD. Management of acute pancreatitis in the first 72 hours. *Curr Opin Gastroenterol.* 2018;34(5):330-335.
- [2] Machicado JD, Yadav D. Epidemiology of Recurrent Acute and Chronic Pancreatitis: Similarities and Differences. *Dig Dis Sci.* 2017; 62(7):1683-1691.
- [3] Garg R, Rustagi T. Management of Hypertriglyceridemia Induced Acute Pancreatitis. *Biomed Res Int.* 2018;2018:47213-57.
- [4] Rawla P, Sunkara T, Thandra KC, Gaduputi V. Hypertriglyceridemia-induced pancreatitis: updated review of current treatment and preventive strategies. *Clin J Gastroenterol.* 2018;11(6):441-448.
- [5] vanDijk SM, Hallensleben NDL, van Santvoort HC, Fockens P, van Goor H, Bruno MJ, et al. Acute pancreatitis: recent advances through randomised trials. *Gut.* 2017;66(11):2024-2032.
- [6] Mandalia A, Wamsteker EJ, DiMagno MJ. Recent advances in understanding and managing acute pancreatitis. Version 2. *F1000Res.* 2018 Jun 28 [revised 2019 Jan 10];7. pii: F1000 Faculty Rev-959. doi: 10.12688/f1000research.14244.2. eCollection 2018.
- [7] Doubilet H, Mulholland JH. Recurrent acute pancreatitis; observations on etiology and surgical treatment. *Ann Surg.* 1948;128:609-38.
- [8] Sarles H. Proposal adopted unanimously by the participants of the Symposium, Marseilles 1963. *BiblGastroenterol.* 1965;7:7-8.
- [9] Carr RA, Rejowski BJ, Cote GA, Pitt HA, Zyromski NJ. Systematic review of hypertriglyceridemia-induced acute pancreatitis: A more virulent etiology? *Pancreatol.* 2016;16(4):469-76.
- [10] Zafir B, Saliba W, Jubran A, Hijazi R, Shapira C. Severe Hypertriglyceridemia-Related Pancreatitis: Characteristics and Predictors of Recurrence. *Pancreas.* 2019;48(2):182-186.
- [11] Guo YY, Li HX, Zhang Y, He WH. Hypertriglyceridemia-induced acute pancreatitis: progress on disease mechanisms and treatment modalities. *Discov Med.* 2019;27(147):101-109.
- [12] Uyar S, Harmandar F, K k M, Taş Z, Dolu S, Tokuç A, et al. Management of hypertriglyceridemia induced acute pancreatitis and therapeutic plasmapheresis : Report of nine cases and review of literature. *ActaGastroenterol Belg.* 2017;80(1):71-74.

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