IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 21, Issue 9 Ser.6 (September. 2022), PP 69-70
www.iosrjournals.org

Acute Appendicitis and Macroamylasemia: A rare case report

Stefanos K Stefanou [1], Christos K Stefanou [2*], Apostolos K Paxinos [3], Polyxeni Oikonomou [4], Thomas Tsiantis [5],Nikolaos Tepelenis [6], Maria Alexandra Kefala [7],Kostas Tepelenis [8].

[1] *Department of Surgery, Henry Dunant Hospital Center, Athens, 11527, Greece.*
[2]*Department of Surgery, General Hospital of Filiates, Filiates, 46300, Greece.*
[3] *Department of Urology, General Hospital of Preveza, Preveza, 48100, Greece.*
[4]*Department of Cardiology, General Hospital of Ioannina "G. Xatzikosta", Ioannina, 45500, Greece.* [5] *Pediatrician, Ioannina, 45500, Greece.*
[5]*Department of Obstetrics and Gynecology, University Hospital of Ioannina, Ioannina, 45500, Greece.*
[6] *Department of Pathology, Agia Sofia Children's Hospital, Athens, 11527, Greece.*
7 Pediatrician, Ioannina, 45500, Greece.
[8] *Department of Surgery, University Hospital of Ioannina, Ioannina, 45500, Greece.*
Corresponding author: *Christos K Stefanou MD, MSc, PhD (c)*

Abstract
Macroamylasemia is a high serum amylase level that persists over time without showing any obvious clinical signs of a pancreatic disease.We describe a case of a 28-year-old male who was diagnosed with acute appendicitis and macroamylasemia. Hehad a high serum amylase level but normal lipase.After the patient had an appendectomy, the abdominal pain went away, but the serum amylase remained increased.

Key words: *appendicitis, macroamylasemia, appendectomy*

Date of Submission: 08-09-2022 Date of Acceptance: 25-09-2022

I. Introduction

Acute appendicitis is the most common surgical disease [1]. Even for a skilled clinician, the condition's presentation can vary, and at times, making the diagnosis can be difficult.Usually, the referred pain is in the midline of the abdomen, and eventually, right iliac fossa pain is brought on by parietal irritation. Hyperamylasemia is most common in pancreatitis, and diseases from salivary gland and hollow visceral perforation. We describe a rare case in which a patient had acute appendicitis, and elevated serum amylase.

II. Case Presentation

A 28 year old man presented to the emergency department with acute abdominal pain in the midline for 5 hours. No other gastro-intestinal symptoms were referred. On clinical examination, he had a fever of 37,7 and the abdomen had tenderness in the right iliac fossa. The blood results showed white blood cell counts of 13.800, crp 56mg/L and an amylase of 630 iu/L. The rest of the blood tests were normal (serum lipase was normal too). There was no significant past medical history. The imaging studies (chest x-ray, CT of the abdomen) did not show free air under the diaphragm, and the CT showed free fluid in the pelvis and thickened appendix (1cm diameter). The patient underwent for laparoscopic appendectomy. Histology confirmed acute appendicitis. The patient was discharged after 2 days in a good condition and the serum amylase was still 520 iu/L. Three months post-operatively the values remained increased between 450-550 iu/L.

III. Discussion

There are times when the symptoms of acute appendicitis can be unusual.According to some reports, a patient who was given pancreatitis treatment passed away as a result of sepsis and a post-mortem examination that revealed perforated appendicitis. [1] The issue may be located with the aid of a careful clinical examination and intelligent imaging.In this case, macroamylasaemia, where the renal amylase:creatinine clearance ratio will be low, is most likely the cause of the hyperamylasemia. [2] Particularly in patients with abdominal pain, it's critical to distinguish macroamylasemia from other hyperamylasemia-related illnesses.Macroamylasemia has been associatedwith a number of diseases, including malabsorption, cancer, liver disease, and diabetes [3]. Males are more likely than females to have macroamylasemia, a benign illness that can affect healthy people.If a patient has hyperamylasemia, a very low amy/cre clearance ratio, and normal renal function, macroamylasemia should be taken into consideration [4]. Because acute appendicitis is known to increase serum amylase activity,

identifying macroamylasemia is a clinical challenge [5]. Diagnosis was established by direct confirmation of the presence of the macroamylase molecule, chronically elevated blood amylase activity, normal serum lipase, normal creatinine, and a low amylase/creatinine clearance ratio.Because serum P-type isoamylase was not elevated andthe abdomen CT scan was normal, other illnesses including acute pancreatitis could also be ruled out.

References

[1]. Forster M. J., Akoh J. A. Perforated appendicitis masquerading asacute pancreatitis in a morbidly obese patient. World J Gastroenterol, 2008, 14 : 1795-1796.
[2]. Ganesh M., SalamI. Lessons to be learned : a case studyapproach – acute appendicitis masquerading as macroamylasaemia.J R Soc Promot Health, 2008, 128 : 140-142.
[3]. Sachdeva CK, Bank S, Greenberg R, Blumstein M, Weissman S. Fluctuations in serum amylase in patients with macroamylasemia. Am J Gastroenterol 1995; 90: 800-3
[4]. Kao YS, Liu FJF, Alexander DR. Laboratory diagnosis of gastrointestinal tract and exocrine pancreatic disorders. In: Henry JB, eds. Clinical diagnosis and management by laboratory methods. Philadelphia: WB Saunders, 1996: 515-45
[5]. Banks PA. Acute and chronic pancreatitis. In: Feldman M, Scharschmidt BF, Sleisennger MH, eds. Gastrointestinal and liver disease. Philadelphia: WB Saunders, 1998: 809-62