

# Mesenteric Adenitis as a Differential Appendicitis Diagnosis: Case Report

Vinícius Moreira Paladino<sup>1</sup>, Thiago Sande Miguel<sup>1</sup>, Bruna Sande Miguel<sup>2</sup>,  
Marcia Machado Galvão Pereira<sup>1</sup>, Fernando Antonio Galvão Pereira Junior<sup>1</sup>,  
Carolina Galvão Teixeira<sup>3</sup>, Caroline Guida Babinski<sup>1</sup>, Naryrton Kalys Cruz dos Anjos<sup>1</sup>,  
Daniel Almeida da Costa<sup>1</sup>, Débora Trindade Martins<sup>1</sup>, Bruno Fonseca dos Santos<sup>1</sup>

<sup>1</sup>The Medical School at the Center of Higher Education of Valença, Valença, Brazil

<sup>2</sup>Unigranrio Medical School, Rio de Janeiro, Brazil

<sup>3</sup>Suprema medical School, Juiz de Fora, Brazil

Email: [professordanielfmv@gmail.com](mailto:professordanielfmv@gmail.com)

**How to cite this paper:** Paladino, V.M., Miguel, T.S., Miguel, B.S., Pereira, M.M.G., Pereira Junior, F.A.G., Teixeira, C.G., Babinski, C.G., dos Anjos, N.K.C., da Costa, D.A., Martins, D.T. and dos Santos, B.F. (2018) Mesenteric Adenitis as a Differential Appendicitis Diagnosis: Case Report. *Journal of Biosciences and Medicines*, 6, 26-30. <https://doi.org/10.4236/jbm.2018.63003>

**Received:** October 14, 2017

**Accepted:** March 11, 2018

**Published:** March 14, 2018

Copyright © 2018 by authors and Scientific Research Publishing Inc. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

## Abstract

Mesenteric adenitis consists of an important differential diagnosis of potentially serious diseases such as acute appendicitis, since they manifest themselves with a similar clinical picture. Case report: A 17-year-old male patient presented with periumbilical abdominal pain for 2 days, of abrupt onset and moderate intensity, who gave away with a common analgesic, which progressed to the right iliac fossa (RIF) and increased of intensity. He also reported liquid diarrhea, with several episodes a day, without mucus and/or blood, 38°C fever, anorexia and vomiting. He was hospitalized for investigating a possible diagnostic of Acute Appendicitis. In the exams, it was considered mesenteric adenitis, and antibiotic therapy was prescribed. The patient had complete improvement at the end of treatment. Conclusions: Given its importance as a differential diagnosis of numerous pathologies, as well as controversial before the therapeutic and diagnostic conduct, it is essential to report these cases in order to elucidate the specificities of this disease.

## Keywords

Mesenteric Adenitis, Appendicitis, Case Report

## 1. Introduction

Mesenteric Adenitis (MA) is described as the set of three or more lymph nodes measuring more than 5 mm in the mesentery of the lower right quadrant of the abdomen, visualized on CT or ultrasonography. It usually occurs in children and adolescents under 16 years, with a slight predominance in males [1].

It can be divided into two distinct groups: primary (idiopathic) and secondary due to infectious, malignant or inflammatory disorders [1]. Among the most common causes, we can highlight the intestinal infections caused by viruses such as influenza, adenovirus, coxsackie B and human immunodeficiency virus (HIV), or bacteria, such as *Yersinia enterocolitica* and *Y. Pseudotuberculosis*, in addition to *Mycobacterium tuberculosis*, *Salmonella sp.* and *S. Typhi* [2] [3] [4].

Classic symptoms include: fever between 38.0°C and 38.5°C; vomiting; changes in feces frequency and consistency; and pain, ranging from discomfort to severe colic, with a more frequent location in RIF and negative Blumberg's signal [1]. Most of the time, the picture is not considered serious, and tends to regress spontaneously after a few days or weeks. In some cases, it may be asymptomatic, being diagnosed by findings during routine exams involving the abdominal region. In these cases, an additional investigation is necessary to clarify the underlying pathology [5].

As previously mentioned, the diagnosis can be guided by signs and symptoms evidenced in anamnesis and physical examination, but it is confirmed by imaging tests such as computed tomography (CT) or ultrasonography (USG) of the abdominal region [6] [7]. Or it can also be done by finding it during abdominal surgeries [1]. Other exams such as complete blood count (BC), abnormal urine elements and sediments (EAS), feces examination and pregnancy test (BHG) may be requested in order to exclude differential diagnoses or as an investigation of the primary pathology [8].

Despite the low severity, MA makes a differential diagnosis with a potentially serious infection in this age group, acute appendicitis, representing 7% of the diagnoses in adult and pediatric patients with clinical suspicion of appendicitis [7].

Treatment depends on the underlying pathology that is causing MA. Thus, if the cause is a viral infection, symptomatic drugs, such as analgesics and anti-inflammatories, should be prescribed until the body eliminates the virus [5]. And if the infection is of bacterial origin, it may be necessary to use antibiotics in addition to the symptomatic drugs [1].

The objective is to report a case of male MA with curative treatment through antibiotic therapy, highlighting the characteristics of this unusual pathology, as well as the differential diagnoses and research and treatment approaches available.

## 2. Case Report

Patient E.A.B., 17 years old, male, student, single and from Valença, RJ, attended the Luiz Gioseffi Jannuzzi School Hospital (HELGI) adult emergency room, presenting as a history of the current disease, periumbilical abdominal pain for 2 days, with abrupt onset and moderate intensity, which gave away with the use of a common analgesic. It evolved to the right iliac fossa (RIF) and increased in intensity. He also reported liquid diarrhea, with several episodes a day, without

mucus and/or blood, associated with fever measured at 38°C, anorexia and vomiting. At physical examination, the abdomen was hyper typical, with superficial and deep palpation pain in RIF and negative Blumberg's signal.

The patient was admitted to the Medical Clinic for diagnostic clarification. Considering the diagnostic hypothesis of acute appendicitis, HC and EAS were performed revealing, respectively, discrete leukocytosis and normal urine. The CT of abdomen and pelvis with intravenous contrast (**Figure 1**), according to the report, it showed "prominence of perirectal lymph nodes, without configuring lymph node enlargement, but among the differential diagnoses, the possibility of MA should be considered with a clinic correlation. Absence of inflammatory process in intestinal loops and cecal appendix of normal tomographic aspect".

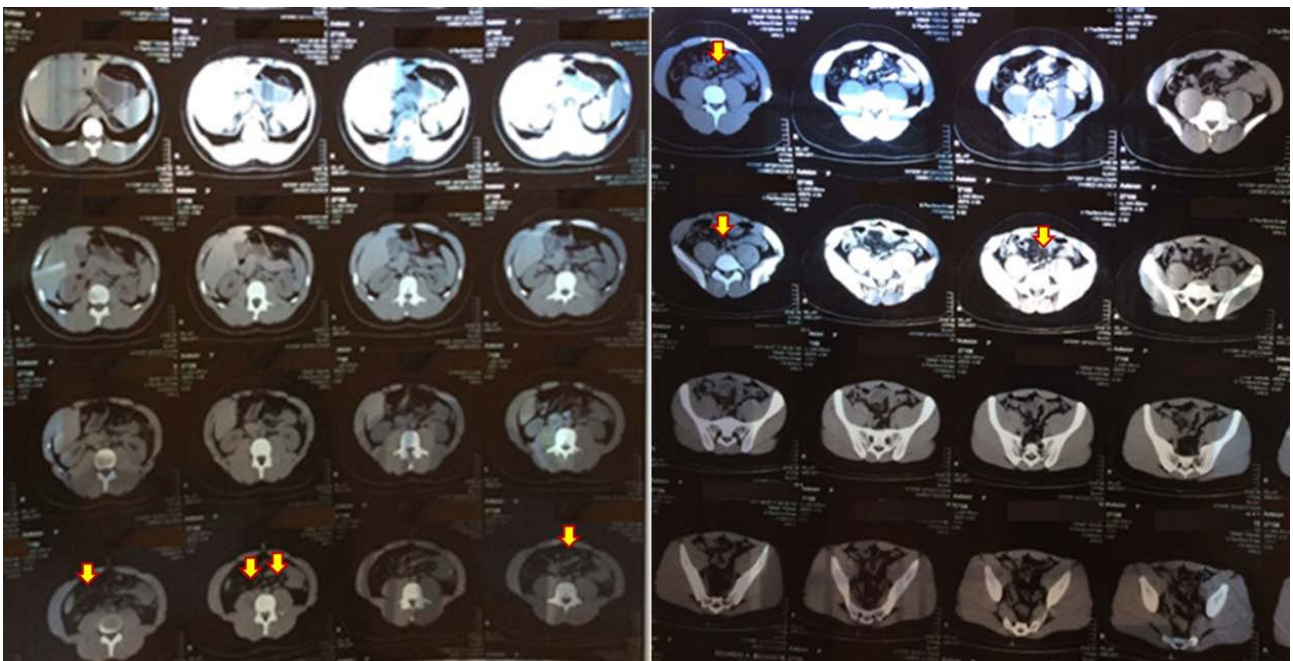
IMAGE AT THE END OF TEXT

Considering the findings and the patient clinical picture, the hypothesis of MA was considered. The patient was discharged, with a prescription of ciprofloxacin 500 mg twice a day, for 7 days. At the end of the antibiotic treatment, he returned to the medical clinic, where he reported improvement in pain and symptoms after 48 hours of the first dose. At the moment he was asymptomatic and without changes in physical examination.

The patient was previously advised about her clinical condition, as well as had clarifications about her case study. After agreeing to the publication, she signed a free and informed consent form.

### 3. Discussion

MA prevalence in general is slightly higher among men when compared to



**Figure 1.** Computed tomography of abdomen and pelvis, with contrast.

women, with the age group 6 to 16 being the most affected [1]. The patient described is a 17 years old man, which is in agreement with those found in literature [2]. Nevertheless, this case is relevant in view of the restricted amount of reports described, as well as the need to evaluate the possible differential diagnoses.

As for symptomatology, fever, vomiting, changes in bowel habits, change in fecal appearance and pain, often in RIF, are described in the initial anamnesis and physical examination of patients seeking medical care [1] [3]. In the case reported, as a history of the current disease, a set of very typical clinical manifestations was reported. However, innumerable pathologies present a similar picture, such as acute appendicitis, which is a more frequent pathology and that leaves the physician more alert to the patient's possible evolution [4]. In view of the variety of diagnostic hypotheses, it is necessary to use complementary diagnostic methods such as imaging tests to investigate the underlying cause of the signs and symptoms presented by the patient, as was done in the case reported [5] [6].

Complementary exams include laboratory, such as HC, and imaging. Diagnostic confirmation of MA is mostly performed through CT or USG of the abdominal region. In rare cases, it is a finding during abdominal surgeries, in which the presence of characteristic lymph nodes is observed "in loco" [7] [8].

Therapeutic conduct is directed to the underlying cause of MA, but because of the difficulty in defining the underlying cause, it still generates controversy. In the case reported, antibiotic therapy was chosen because, given the clinical picture and the results evidenced in the complementary tests, bacterial etiology was the most likely hypothesis [1] [3].

#### 4. Conclusions

Despite its prevalence and importance as an alternative diagnosis for acute appendicitis, there is no consensus in the radiological definition nor in the clinical semiology of MA. Most of the time there is no clear cause that's why its treatment remains controversial, evidencing the need for more studies to better delineate its natural history.

In the case described, the hypothesis is that it is a secondary etiology due to infectious diseases. For this reason, the treatment with antibiotic was indicated, evolving with improvement of the condition.

#### References

- [1] Macari, M. (2002) Mesenteric Adenitis? CT Diagnosis of Primary versus Secondary Causes, Incidence, and Clinical Significance in Pediatric and Adult Patients. *American Journal of Roentgenology*, **178**, 853-858. <https://doi.org/10.2214/ajr.178.4.1780853>
- [2] Figueiredo, J., Santos, Â., Clemente, H., Lourenço, A., Costa, S., Grácio, M.A. and Belo, S. (2014) Schistosomose e Apêndicite Aguda. *Acta Médica Portuguesa*, **27**, 396-399. <https://doi.org/10.20344/amp.5150>

- [3] Likitnukul, S. (2002) Appendicitis-Like Syndrome Owing to Mesenteric Adenitis Caused by *Salmonella typhi*. *Annals of Tropical Paediatrics*, **22**, 97-99. <https://doi.org/10.1179/027249302125000247>
- [4] Garcia-Corbeira, P., Ramos, J.M., Aguado, J.M. and Soriano, F. (1995) Six Cases in Which Mesenteric Lymphadenitis Due to Non-*Typhi* Salmonella Caused an Appendicitis-Like Syndrome. *Clinical Infectious Diseases*, **21**, 231-232. <https://doi.org/10.1093/clinids/21.1.231>
- [5] Soares, A.T., Couto, C., Romão, P., Saraiva de Melo, I., Braga, M. and Diogo, J. (2014) Gastroenterite aguda por *Campylobacter* spp: casuística de uma urgência pediátrica. *Acta Medica Portuguesa*, **27**, 556-560. <https://doi.org/10.20344/amp.5122>
- [6] Melo, A.S.A., Moreira, L.B.M., Pinheiro, R.A., Noro, F., Alves, J.R.D. and Machado, B.B. (2002) Apendicite epiplóica: Aspectos na ultra-sonografia e na tomografia computadorizada. *Radiologia Brasileira*, **35**, 171-174. <https://doi.org/10.1590/S0100-39842002000300008>
- [7] Freitas, G.P., Borges, A.A., Mendonça, R., Ribeiro, C. and Chindamo, M.C. (2008) Apendagite epiplóica: Aspectos clínicos e radiológicos. *Arquivos de Gastroenterologia*, **45**, 163-165. <https://doi.org/10.1590/S0004-28032008000200014>
- [8] Rao, P.M., Rhea, J.J. and Noveline, R.A. (1997) Ct Diagnosis of Mesenteric Adenitis. *Radiology*, **202**,145-149. <https://doi.org/10.1148/radiology.202.1.8988204>