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"INFECTIOUS MONONUCLEOSIS AND ITS CLINICAL VARIABILITY: A CASE REPORT"

Elisa Basso Donatti[1]*, Sulene Pirana[2], Amanda Machado Amaral[1], Henrique Andrade[3] and Daniela Leme Araújo[4]

*[1]Medical Residence in Otorhinolaryngology and Cervico-Facial Surgery at the University Hospital São Francisco de Assis (HUSF), Bragança Paulista, São Paulo, Brazil, 12916-542.
[2]PhD in Otorhinolaryngology from the University of São Paulo, Coordinator of the Service of Otorhinolaryngology and Cervico-Facial Surgery at HUSF, Professor at the Faculty of Medicine at the University of São Francisco de Assis, Professor of Medicine at the Federal University of Alfenas.
[3]Medical Student at the University of São Francisco- Bragança Paulista- SP.
[4]Otorhinolaryngologist, Preceptor of the Service of Otorhinolaryngology and Cervico-Facial Surgery at Hospital Universitário São Francisco - HUSF, Department of Otorhinolaryngology and Cervico-Facial Surgery – Bragança Paulista –SP.

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***Corresponding author: Elisa Basso Donatti**
Medical Residence in Otorhinolaryngology and Cervico-Facial Surgery at the University Hospital São Francisco de Assis (HUSF), Bragança Paulista, São Paulo, Brazil, 12916-542.

ABSTRACT

Introduction: Infectious Mononucleosis is an infectious-contagious disease whose main etiological agent is the Epstein-Barr virus. Transmission occurs through contact with oropharyngeal secretions after an incubation period of 30 to 45 days. The infection is usually asymptomatic, but when it presents symptoms it is characterized by a prodrome of malaise and fatigue, followed by fever and odynophagia. Findings such as hepatosplenomegaly are infrequent, especially in the pediatric age group. **Objective:** To report a case of infectious mononucleosis with an atypical course. **Method:** Descriptive study in which a single, qualitative and exploratory case study was carried out based on information extracted from the medical record, as well as data obtained from the results of exams and reports that are attached to it. **Case report:** An 8-year-old male patient with tonsillitis, persistent fever, cervical adenopathy, odynophagia refractory to antibiotic therapy, prostration, lack of appetite and diffuse abdominal pain, who evolved with significant liver changes. **Conclusion:** Abdominal pain, absence of rash after antibiotic therapy, and especially hepatosplanomegaly with elevated liver enzymes are atypical findings in the evolution of this disease and constitute diagnostic confounding factors.

KEYWORDS: Infectious Mononucleosis; Epstein-Barr virus; Pharyngitis; Lymphadenopathy. Hepatomegaly. Splenomegaly.

INTRODUCTION

Infectious Mononucleosis (IM), described since 1889 by Pfeiffer as "glandular fever" and popularly known as "kissing disease", is an infectious-contagious disease in which the main etiological agent is the Epstein-Barr virus (EBV), of the herpes family human virus. It affects individuals of both sexes, mostly from 15 to 25 years of age.[2,3,4,5]

Although infected patients are often asymptomatic, this pathology can present in an acute and nonspecific form with a syndromic picture characterized by a triad: high fever, pharyngitis and cervical adenopathy.[1,2,3,4]

It can present as a benign and self-limiting lymphoproliferative disorder, skin rash after the use of antibiotics, malaise, fatigue and lymphocytosis with atypical lymphocytes. Hepatosplenomegaly is an infrequent alteration, especially in the pediatric age group, which can lead to splenic rupture, one of the main complications of the pathology. The younger the virus is acquired, the milder the symptoms.[1,2,4]

Treatment is done with symptomatic patients, aiming to control fever, pain and control of possible complications. After the use of penicillin derivatives, erythematous and diffuse skin rash may occur, which can be interpreted as

a worsening of the condition or as an anaphylactic reaction to the drug, therefore not being indicated.[2,3,4]

As the diagnosis is clinical and similar to other viral or bacterial pharyngotonsillitis, knowledge of the condition is necessary in order to conduct an adequate management of the pathology, reducing the indiscriminate use of antibiotics and promoting better patient therapy.

CASE REPORT

Patient P.H.J.A, male, 8 years old, previously healthy, with odynophagia for 5 days associated with fever, prostration, loss of appetite, nausea, vomiting and diffuse abdominal pain. He used benzathine penicillin with no improvement in the condition and no skin rash after using the medication.

The patient was febrile, dehydrated, anicteric, with left cervical lymph node enlargement (region IIIA) painful to palpation, fibroelastic consistency, mobile, not adhered to deep planes, grade II hypertrophic palatine tonsils with bilateral exudate, left anterior pillar hyperemia, absence of trismus. Painful abdomen on palpation in the right hypochondrium region, non-palpable liver and palpable spleen 3 cm from the costal margin.

Laboratory: hemoglobin = 12mg/dl; hematocrit = 36.3%; leukocytes = 16,200, 41% neutrophil, 5% rods, 45% typical lymphocytes, 0% atypical lymphocytes; 9% monocytes; platelet = 220,000; PCR = 7.2; urea = 11.3mg/dl; creatinine = 0.27mg/dl; TGO = 370U/L; TGP = 459U/L; albumin = 4.48g/dl; gamma glutamyl transferase = 338 U/L; alkaline phosphatase = 620U/L; lactic dehydrogenase = 1200U/L; total bilirubin = 3.1mg/dl; direct bilirubin = 3.0mg/dl; indirect bilirubin = 0.1mg/dl.

Serology: non-reactive IgM and IgG toxoplasmosis. Cytomegalovirus IgM reagent and IgG non-reactive. Epstein Barr IgM and IgG reagent. Oropharyngeal culture showed no bacterial growth.

Total abdominal ultrasound: liver with slightly enlarged dimensions, preserved contours and homogeneous echotexture. Pervious portal vein of normal caliber. Spleen with increased dimensions, normal contours and ecotexture. No renal, pancreatic, urinary and biliary changes.

Cervical Computed Tomography (CT): increase in number and volume of lymph nodes at levels 1B, 2A, 2B, 3 and 4 bilaterally with formation of small clusters at levels 3 and 4 to the left measuring 4.1 x 6.6 x 2 .2 cm in its anteroposterior, longitudinal and transverse axis, respectively. Exuberant enlargement of lymphoid tissue near the posterior rhinopharynx obliterating the air column as well as the bilateral tonsillar fossa. No other changes.

DISCUSSION

Infectious mononucleosis is caused by the Epstein-Barr Virus (EBV), of the Herpes Virus 1 family, which has universal distribution and affects about 90% of all adults. Its transmission occurs through the intimate contact of oropharyngeal secretions, such as saliva and is rarely caused by blood transfusion or sexual contact, in addition, the period of transmission can extend for more than 1 year.[1,2,4]

It occurs in any age group with a higher incidence in the first three years of life and in adolescents and young adults. Socioeconomic development seems to be one of the factors that determine the timing of transmission, so that children living in underdeveloped countries have serological reactivity between 80% and 100%, from three to six years of age. Likewise, the age at which the primary infection is acquired appears to directly influence the clinical presentation of the disease. The younger the virus is acquired, the less severe the symptoms are, therefore, in the pediatric age group, asymptomatic or mild symptoms are expected, whereas in adults, 50% will present clinical manifestations that are often more severe.[1,2,3, 5,6,7]

Clinical manifestations occur in response to proliferation of virus-infected B lymphocytes, triggering cellular and humoral responses, mainly at the expense of cytotoxic T lymphocytes that control the replication of viral proteins during the acute phase of the disease. Despite the clinical resolution of the acute disease, the virus remains in memory B cells, perpetuating latent infection.[1,2,7]

The classic triad of IM consists of high fever, pharyngitis, and cervical adenopathy, with the average duration of symptoms being two to three weeks. Fever is the predominant sign of the disease (87.3% of cases), it is usually lower in children and higher and of longer duration in adults. The polymorphism in the presentation of oropharyngeal changes ranges from simple tonsillar erythema to grayish-white exudate, rash on the palate (50% of cases), gelatinous appearance of the uvula and soft palate, in addition to the rare formation of a pseudomembrane covering the supraglottic region and edema of the epiglottis and arytenoids. Cervical adenopathy is found in 80% to 100% of cases and is usually associated with generalized adenopathy. The lymph nodes are enlarged, painful, of fibroelastic consistency, well delimited, not adhered to deep planes and do not tend to evolve with necrosis and fistulization. Hepatomegaly and splenomegaly occur in 15% to 25% and 0% to 75% of cases respectively, with a lower incidence in children and sometimes leading to symptoms of abdominal pain. Alterations in liver function occur in 95% of these cases and jaundice is found in 5% to 11%, and may exceed 8 mg/100ml2.[1,2,3,6,4,6,7]

Despite the low lethality of IM, complications have a mortality of 1:3000 cases, being mainly represented by

neurological complications such as meningoencephalitis, meningitis, acute cerebellitis Guillain Barré syndrome and transverse myelitis.[2,4]

Liver complications are rare, and can occur as hepatitis, liver failure and fatal fulminant liver necrosis. One of the most feared complications is spontaneous splenic rupture or after trauma. Rapid growth of the spleen due to lymphocytic infiltration and capsule involvement that make the organ fragile, leading to rupture in approximately 0.5% of cases; 90% of these patients are male. Abdominal pain is an infrequent finding in the evolution of IM, but it should be taken into account in cases of splenomegaly, as it may suggest the presence of subcapsular hematomas that precede the rupture. Abdominal pain in the left upper quadrant should be considered suspicious, which evolves with generalized abdominal pain, radiating to the left shoulder from the second week of the disease.[2,4,5,7]

The patient under study did not fit into the age group with the highest incidence of the disease and had symptoms outside the clinical-epidemiological pattern, making immediate diagnosis difficult. The presence of hepatosplenomegaly, although rare, affects more often adults and not the pediatric age group. It is noteworthy that the clinical triad was present.

IM is diagnosed clinically but can be complemented in the laboratory. Blood counts may show thrombocytopenia and leukocytosis at the expense of lymphocytes (> 50%) with atypical findings (10% of total lymphocytes), Downey cells or immune cells, for example. Aminotransferases and bilirubin may be increased. Laboratory tests of liver function and damage increased during the acute phase and the blood count did not undergo the classic changes, denoting the atypical presentation of the disease. Urine test I may show proteinuria and/or hematuria. The Paul-Bunnell-Davidson test is performed to detect heterophile antibodies by increasing IgG (50% of cases) and mainly IgM (100%). Other complementary tests are monotest for heterophilic antibodies, ELISA, DNA-PCR. The gold standard being tissue biopsy and in situ hybridization.[2,3,4,5]

As the pathology does not have a specific picture, it is essential to contrast with the possible differential diagnoses, for example: bacterial or viral infections of the upper airways, bacterial tonsillitis, hepatitis, rubella, rickettsiae, toxoplasmosis, cytomegalovirus, diphtheria, Hodgkin's lymphoma, leukemia acute, among others. Cervical CT made it possible to exclude these differential diagnoses.[3,5]

Treatment consists of administering symptomatic patients as the disease is self-limiting. Use of steroids, 0.5mg/day, for 10 to 14 days, with gradual dosage reduction. There are still no effective preventive methods against EBV, only avoiding contact with the saliva of people with the disease during the transmission period.[2,3,5]

The patient showed improvement in general condition, resolution of tonsil exudate and liver laboratory abnormalities, was discharged after 11 days, maintaining outpatient follow-up without further complications.

CONCLUSION

The case includes a patient with infectious mononucleosis outside the clinical and epidemiological pattern. Abdominal pain, absence of rash after use of antibiotic therapy, and especially hepatosplanomegaly and elevated liver enzymes constituted diagnostic confounding factors. This clinical picture is atypical for infectious mononucleosis, especially in the pediatric age group, which tends to have milder conditions. Therefore, it is necessary to raise the hypothesis of infectious mononucleosis and its differential diagnoses against pharyngotonsillitis.

BIBLIOGRAPHIC REFERENCES

1. Barros M.H.M., Vera-Lozada G., Segges P., Hassan R., Niedobitek G. Revisiting the Tissue Microenvironment of Infectious Mononucleosis: Identification of EBV Infection in T Cells and Deep Characterization of Immune Profiles. *Front. Immunol*, 2019; 10: 146. doi: 10.3389/fimmu.2019.00146. [PMC free article] [PubMed] [CrossRef] [Google Scholar]2)
2. BRASIL. LUIZA HELENA FALLEIROS R. CARVALHO. Mononucleose infecciosa. Jornal de Pediatria. Rio de Janeiro, 1999; 115-125.
3. BRASIL. Ministério da Saúde. Secretaria de Vigilância em Saúde. Mononucleose infecciosa. Disponível em: <http://bvsms.saude.gov.br/bvs/publicacoes/guia_bolso_4ed.pdf>. Acesso em: 20 mar. 2019.
4. DA SILVA, VANESSA YURI NAKAOKA ELIAS et al. MONONUCLEOSE INFECCIOSA - UMA REVISÃO DE LITERATURA -. REVISTA UNINGÁ REVIEW, [S.l.], v. 16, n. 1, jan. 2018. ISSN 2178-2571.
5. JULIANA LINHARES DE OLIVEIRA (São Paulo). O vírus Epstein-Barr e a mononucleose infecciosa. Revista Brasileira de Clínica Médica, São Paulo, v. 10, n. 6, p.535-543, nov./dez. 2012.
6. MCADAM, Alexander J.; MILNER, Danny A.; SHARPE, Arlene H. Doenças Infecciosas. In: PATOLOGIA, Robbins & Cotran -. Bases patológicas das doenças. 9. ed. Rio de Janeiro: Elsevier, 2016. Cap. 8. p. 369-371.
7. MONONUCLEOSIS INFECCIOSA. Medigraphic: Médica Sur Sociedad de Médicos, v. 10, n. 2, 2003. SCHOOLEY, Robert T. Infecção peço vírus Epstein-Barr. In: GOLDMAN, Lee; SCHAFER, Andrew I. Cecil Medicina. 24. ed. Rio de Janeiro: Elsevier, 2014. Cap. 385. p. 2474-2477.