International Journal of Medical Science and Clinical Research Studies

ISSN(print): 2767-8326, ISSN(online): 2767-8342

Volume 02 Issue 11 November 2022

Page No: 1276-1278

DOI: https://doi.org/10.47191/ijmscrs/v2-i11-21, Impact Factor: 5.365

Giant Splenomegaly Secondary to Chronic Myeloid Leukemia: Case Report

Jacuinde Villalobos Beatriz Alejandra[1], Castro Gutierrez Silvia[2], Ana Karen Altamirano Suárez[3], Víctor Hugo Herrera Aboytes[4], Gustavo Arturo Martinez Guzman[5]

[1,2,5]Facultad de Estudios Superiores Iztacala de la Universidad Nacional Autónoma de México. Ciudad de México, México.
[3]Universidad Anáhuac México Norte. Naucalpan de Juárez, México.
[4]Universidad Anáhuac Querétaro. Santiago de Querétaro, México.

ABSTRACT

The abnormal growth of the spleen is called splenomegaly, this finding is a challenge when determining its etiology for the first contact physician due to the wide range of diagnostic possibilities. Infectious, tumoral, and hematologic aetiologies should always be sought among the main aetiologies. In this case, we present a 45-year-old male patient who came to the clinic for the first time because he presented with a palpable and non-painful abdominal tumor of long evolution, with a diagnosis of chronic myeloid leukemia for 6 years, with poor adherence to treatment. Its diagnosis is based on obtaining images through methods such as tomography or magnetic resonance imaging to confirm the presence of splenomegaly, but ultrasound remains the technique of choice in Primary Care. Through clinical suspicion and performing an ultrasound in consultation, we arrive at a clinical diagnosis.

ARTICLE DETAILS

Published On:
14 November 2022

Available on:
https://ijmscr.org/

INTRODUCTION

The spleen is an organ located in the left hypochondrium. Its pathological growth is called splenomegaly. Despite being a symptom of a variety of diseases, in the current bibliography there is very little evidence of its precise etiology, since there are multiple causes that can generate it. However, hematological diseases were significantly associated with the presence of massive splenomegaly, with parasitic diseases being the main cause of this disease in developing countries, according to various studies.[1,2]

Splenomegaly is defined as an increase in the size of the spleen greater than its normal dimensions (which on average in adults are 12 × 7 × 3.5 cm) with an approximate weight of 150 g and a volume of 300 ml. The spleen is the largest lymphatic organ in the body and, in addition to participating in the primary immune response against microorganisms and proteins foreign to the human body, as well as other functions such as removing gerocytes (erythrocytes that have exceeded their half-life of 120 days of life) as well as other blood cells bound to antibodies. Blood enters the spleen, is filtered through the splenic cords (where red blood cells are destroyed), and is exposed to immunologically active cells. The splenic red pulp occupies more than half the volume of the spleen and is the site where gerocytes are destroyed and reticulocyte cellular inclusions are removed. The white pulp contains macrophages and B and T lymphocytes that participate in the detection of microorganisms and foreign proteins as part of the primary immune response (the spleen is the main producer of IgM, especially during childhood). [3,4,5,6]

MASSIVE SPLENOMEGALY ETIOLOGIES

It is so called when the spleen has grown so much that the lower pole reaches the pelvis, or when it crosses the midline into the patient's right or lower abdominal quadrants. There are few conditions that present this degree of splenomegaly: but between chronic myeloid leukemia (as is the case of our patient), primary myelofibrosis or secondary to polycythemia vera or primary thrombocytosis, Gaucher disease, small cell lymphoma, non-cellular leukemia hairy as well as the malarial syndrome with reactive splenomegaly (also called) tropical splenomegaly. [7,8]

IMAGING ASSESSMENT

Ultrasound examination can confirm the presence of splenomegaly or cysts, tumors, abscesses, hematomas, and measures the actual size of the spleen quite accurately, but is operator dependent. [9,10]

Computerized axial tomography (CAT) and magnetic resonance imaging (MRI) of the upper left abdominal quadrant can more finely highlight abnormalities in size and shape, and define, if present, any parenchymal pathology. Positron emission tomography (PETCT) with 18F-FDG has become a useful tool in the diagnosis of malignant lesions such as lymphomas. Selective arteriography confirms the existence of thrombosis in patients with existing liver disease. [11]

LABORATORY

Splenomegaly in most cases is the result of a systemic disease and only in very selected cases will it guide us to a primary disease of the spleen, so diagnostic studies do not focus directly on the spleen, but rather help to determine the diagnosis of diseases that occur with splenomegaly. The most useful laboratory studies are complete blood count (CBC) with reticulocytes and differential count, peripheral blood smear examination, and liver function test (LFT). [1]

CASE PRESENTATION

A 45-year-old male patient comes to the clinic who reports a palpable and painless tumor of abdominal location of 6 months of evolution without associated other symptoms. With a history of diagnosis of chronic myeloid leukemia, with poor adherence to treatment.

He goes to the clinic reporting that for several months she has noticed a mass in her abdomen that has been growing without any associated symptoms or signs. When questioned specifically, he denied fever, weight loss, asthenia and alteration of the intestinal rhythm.The general physical examination is normal except for a mass that occupies the entire left hemiabdomen with a regular border, soft consistency and not painful on palpation.

Given these findings, an abdominal ultrasound was performed at the health center, finding hepatomegaly and establishing the diagnosis of splenomegaly of the mass in the left hemiabdomen. This secondary to poor adherence to leukemia treatment, for which general surgery in conjunction with hematology decided to perform a splenectomy. Obtaining a surgical piece of 3670 grams, 42 centimeters long, 26 high and 26 wide.(Figure 1)

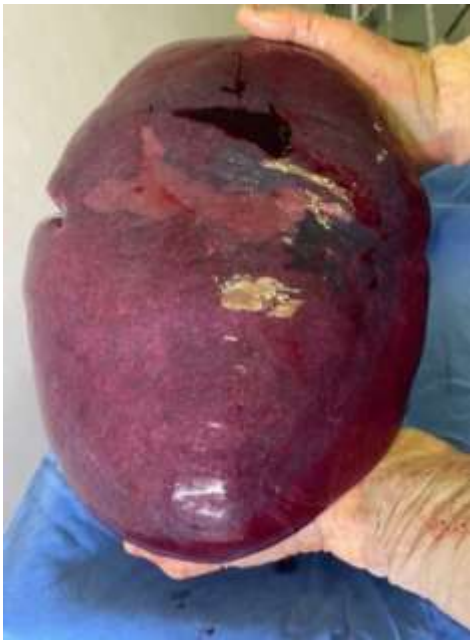

Figure 1. Large mass obtained after surgery.

The patient reports postoperative improvement on day 9 and is discharged with alarm data and emphasis on adherence to treatment to avoid complications.

CONCLUSIONS

Splenomegaly is a symptom that can suggest several clinical possibilities. Once the diagnosis has been established, it is the doctor's job to establish the possible etiology in order to reverse it and treat it before it ends in a splenectomy. Treatment and follow-up will depend on the etiological diagnosis. In the case presented, it was an CLL that, at the present time, being clinically stable and asymptomatic, a splenectomy was performed to avoid a future complication.

REFERENCES

I. Kaushansky K, Lichtman MA, Prchal JT, Levi MM, Press OW, Burns LJ et al. Williams Hematology. 9th edition. McGraw-Hill Education. 2016.
II. Noguerol M, Ramírez C. Esplenomegalia. AMF. 2015; 11 (11): 623-31.
III. Brown NF, Marks DJB, Smith PJ, Bloom SL. Splenomegaly. Br J Hosp Med (Lond). 2011; 72: M166-9.
IV. Schrier SL, Mentzer WC, Tirnauer JS. Approach to the adult patient with splenomegaly and other splenic disorders. In: UpToDate. Disponible en: http://www.uptodate.com
V. Salcedo Joven I, Segura-Grau A, Díaz Rodríguez N, Segura-Cabral JM. Ecografía de bazo y retroperitoneo. Semergen. 2016; 42 (6): 395-401.
VI. Sánchez IM, Vegas T, Alonso R, Domínguez D, Guerrero FJ, Rico MC et al. Utilidad de la ecografía clínica abdominal en medicina de familia (1): hígado, vías biliares y páncreas. Aten Primaria. 2018; 50 (5): 306-15.
VII. Eichner ER, Whitfield CL. Splenomegaly: an algorithmic approach to diagnosis. JAMA. 1981;246(24):2858-61.
VIII. Eichner ER, Whitfield CL. Splenomegaly. An algorithmic approach to diagnosis. JAMA. 1981;246:2858-61.
IX. Eichner ER. Splenic function,: Normal, too much and too little. Am J Med. 1979;66:311-20.
X. Fishman D, Isemberg DA. Splenic involvement in rheumatic diseases. Sem Arthritis Rheum. 1997;27:141.
XI. Gielchinsky Y, Elstein D, Hadas-Halpern I, et al. Is there a correlation between degree of splenomegaly, symptoms and hypersplenism? A study of 218 patients with Gaucher disease. Br J Haematol. 1999;106:812.
XII. Johnson JD, Raff MJ, Barnwell PA, Chun CH. Splenic abscess complicating infectious endocarditis. Arch Intern Med. 1983;143:906.