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Case Report

AMOEBIAN HEPATIC ABSCESS: CASE REPORT

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A B S T R A C T

Background: Clinical treatment is the most indicate for cases of amoebian hepatic abscess. The earlier the diagnosis, the quicker the farmacological treatment can be oferted, resulting in good prognosis for the patient. Recognize signals and symptoms is fundamental for a substantial suspicion jointly with imaging exams.

Cases report: Two case reports of two patients diagnosticated with ampebian hepatic abscess. First patient: WRO, 45 years old, male, admitted to the emergency room of the Hospital Center of the Municipality of Santo André with diagnostic hypothesis of acute inflammatory abdomen, was submitted to exploratory laparotomy with epiploic appendagitis, submitted to resection of epiploic appendages, however there was no clinical improvement, it maintained leukocytosis and ultrasound showed liver abscess of approximately 7cm in diameter, confirmed by abdominal computed tomography. Second patient: J.M.C., 75 years old, female, entered at the same service with a diagnostic hypothesis of acute inflammatory abdomen. An abdomminal tomographywas performed, which revealed hepatic abscess, whose amebic etiology was confirmed by microscopic examination of fresh stool. Clinical treatment with antibiotic therapy and anti-parasitic treatment was started for both patients, resulting in lesions decrease, confirmed by radiological examination, therefore, no surgical intervention was required in any of the cases.

Conclusion: The adopted approach was conservative and consisted in the administration of antiparasitics and antibiotics, not choosingabscessespunction. These guidelines are recommended by other reports and studies that have shown that abscess puncture should be reserved for particular cases and that the single use of pharmacological therapy is effective in decreasing abscess size and resolution.

INTRODUCTION

Amebiasis is a disease caused by the intestinal parasite Entamoeba histolytica. It is estimated that about 10% of the world population is infected with Entamoeba histolytica, with 10% of them likely to develop invasive amebiasis, and in turn, 1% of these patients develop amoebic abscess in the liver. Entamoeba histolytica is endemic in tropical countries with low socioeconomic status and poor hygiene, as in the countries of Southeast Asia, Central America, South America and Africa[5,7,8]. It is the third leading cause of death from parasitic diseases in developing countries[6,11]. It is estimated globally that 40 million people are infected annually and between 40,000 and 100,000 deaths occur per year from amoebic colitis and extraintestinal amoebic infections[2]. Many protozoa of the genus Entamoeba sp. colonize the human being, but not all are associated with diseases[1]. Entamoeba histolytica is known to be a pathogenic amoeba, associated with intestinal and extraintestinal amoebic infections[1]. Amebian liver abscess is one of the most common and most threatening complications of extraintestinal amoebic infections.Men tend to be more susceptible to amebian liver abscesses, about ten times more, in the 30-50 year-old age range[2,7,10]. This reveals the greater male susceptibility to invasive infections. In addition, other risk factors for evolution of the amebic liver abscess are hepatic dysfunction, malnutrition, hypovitaminosis, immunosuppression, alcoholism[2,7].

Patients commonly present with an acute or subacute history of fever, which is a predominant symptom and reported in approximately 90% -95% of cases, chills, pain in the upper right quadrant of the abdomen, painful hepatomegaly, nausea and vomiting, although there is 20% -50% of patients who have a prolonged history of diarrhea, weight loss and diffuse

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abdominal pain. Jaundice is not uncommon, but it may be a sign. The symptoms are usually acute (less than 10 days), but may be chronic [2,4,10]. The transmission of the amoeba is fecal-oral, directly by person-to-person contact or indirectly through the ingestion of contaminated water or food by feces containing mature cysts or trophozoites of the parasite[1,4]. The cysts run through the gastrointestinal tract, reaching the large intestine, where there is the excision in which there is release of trophozoites, which can remain in the intestinal mucosa, dividing by binary division, contaminating the feces that pass through (noninvasive infection), or can come into the mucosa (intestinal disease), to reach vessels and thereby gain the bloodstream allowing trophozoites to reach other organs such as liver, brain and lungs (extraintestinal disease)[4]. The trophozoites reach the portal venous circulation, multiplying in the portal vein radiculi, forming the colonies of trophozoites, causing focal hepatic ischemia[6,11]. In addition, proteolytic enzymes produced by the parasite destroy the hepatic parenchyma causing hepatocyte necrosis, forming the abscess[2,6]. The reddish brown color of the abscess contents is due to the digestion of necrotic liver tissue and erythrocytes by proteolytic enzymes, giving the name "anchovy paste" to the appearance of this content[9].

The most common complication of hepatic abscess is secondary infection, which occurs in 10% -20% of cases, followed by rupture of the abscess into adjacent cavities or organs, with more common extension or rupture to the lung or pleural cavity[6].

The right hepatic lobe is more frequently affected in relation to the left one (9: 1), being the position immediately below the diaphragm most common affected[4,6,10]. This is probably due to the increased volume of the right lobe and the fact that it receives most of the venous drainage of the cecum and ascending colon, which are the portions of the small intestine most commonly affected by amebiasis[9,11]. Usually amoebic liver abscesses presents itself as a single abscess, but may be multiple[4,6,10].

This report aims to describe the cases of two patients treated at the Centro hospitalar do município de Santo André,both diagnosed with amebic liver abscess, comparing the symptoms, the exams and the treatments offered with those described in the literature.

Case Report

W.R.O., a 44-year-old male from Santo André, a social worker, was admitted to the Hospital Central do Município de Santo André on May 2, 2016, transferred on the same day fromHospital Bangu. Yellowish conjunctival complainant, intense abdominal pain on the right side with irradiation to the whole abdomen, in colic, worsened eating and drinking, improved with induced vomiting and in use of spasmolytic drugsfor a week. Refers dailyfever of 39.8ºC, sweating, chills, headache, dyspnea, diuresis once a day in beet-colored, abdominal distension before the onset of pain. It refers to similar episodes with spontaneous improvement some months ago.

At physical examination, the patient was in good general condition, stained, dehydrated (++ / 4+), acyanotic, icteric (+ / 4 +), tachycardic (127 bpm). Abdomen globose, distended, tense, decreased hydroaéreo noise, painful to superficial and deep palpation and with Bloomberg's descompression +.The lab tests showed hemoglobin of 12.9 g / dl, hematocrit of 37.8%; Leukocytes 17,800 / ml; Platelets of 345,000 / ml; Urea of 46mg / dl; Creatinine 0.8mg / dl, sodium 145mEq / L and potassium of 4.1mEq / L. In urine, hemoglobin ++ / 4+, erythrocytes 288,000 / ml, amorphous urate crystals ++ and bacteriuria ++ were identified.

An exploratory laparotomy was performed on the day of admission due to suspicion of appendangitis. Adherences and blockages of the large omentum on the transverse colon and hardened epiploic appendages were identified in the transverse colon, retaining part of the large omentum and inflamed epiploic appendages.

Renal ultrasonography revealed the presence of free fluid in the abdominal cavity located inferiorly to the right lobe margin of the liver, a heterogeneous mass in the right hepatic lobe (67x43mm in the main axes) suggesting an abscess.

Computed tomography of the upper abdomen revealed a discrete amount of free fluid in perihepatic topography. Presence of hypoattenuating mass, scintigraphy and with annular enhancement by the contrast medium located in its segment 6, measuring about 5.0x4.1 cm in its major axes, suggesting, as the first diagnostic hypothesis, hepatic abscess.

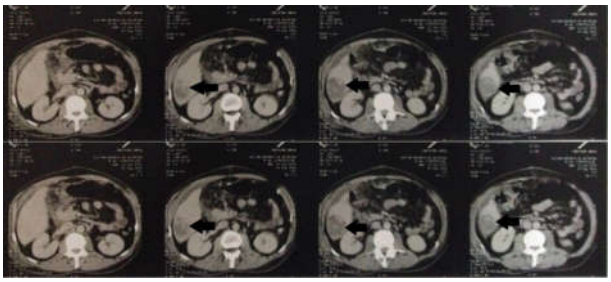

Figure 1 Computed tomography of the upper abdomen (05/05/16). Arrows: Hypodense stains in hepatic segment 6, suggesting hepatic abscess.

Patient came up with diminished vesicular murmurs in the right middle lobe, with snoring, decreased expansibility, both lungs with pectoralóquia, vesicular murmur diminished in bases and with snores. Chest tomography showed bilateral pleural effusion and bibasal pneumopathy and atelectasis.

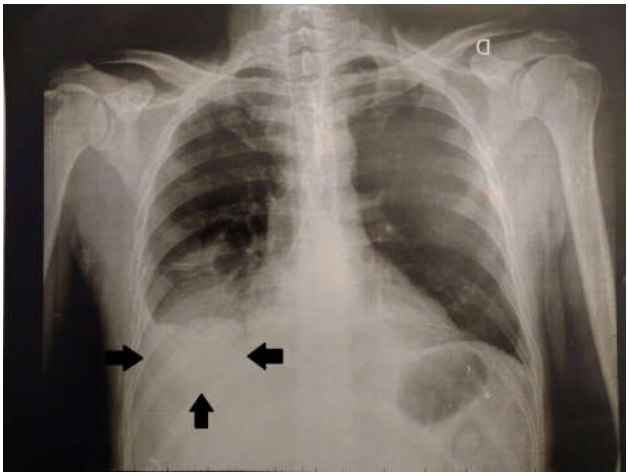

Figure 2 X-ray. Arrow: opacified region indicating pleural effusion in the right hemithorax.

The conduct adopted was exploratory laparotomy at the time of admission with epiploics appendages removal and clinical treatment with metronidazole 500mg IV of 8/8 hours for thirteen days, Rocefin 1g EV of 12/12 hours for thirteen days,

and Mebendazole 200mg VO of 12/12 hours for five days. Patient was discharged after thirteen days of hospitalization with improvement of the condition.

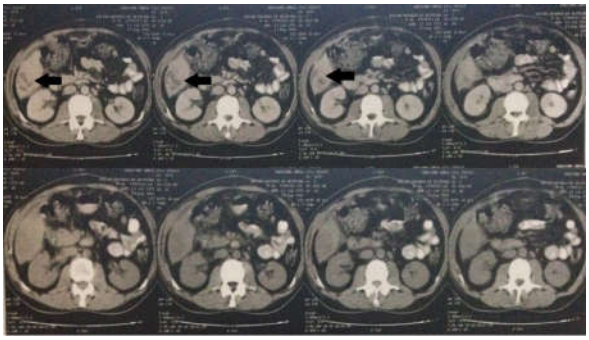

Figure 3 Computed tomography of the upper abdomen (05/13/16). Arrows: Decreased hypodense spots after 11 days of treatment.

J.M.C., female, 75, from Santo André, was admitted to the Hospital Center of Santo André on 10/03/2015. Complainant of intense weakness one year ago with a weight loss of 6-10 kg in this period, epigastric pain beginning six days ago and discharge, diarrhea for 15 days with mucus, intense abdominal pain in colic that improved with evacuation, satiety and anorexia. Patient being treated for anemia (using ferrous sulphate) without any hematic exteriorization.

On physical examination, the patient had a distended, flaccid abdomen, painful superficial and deep palpation in the epigastrium and hypogastrium, palpable liver five centimeters from the right costal border, with a palpable mass of 3.0 cm in the epigastrium.

Laboratory tests showed hemoglobin of 8.0 g / dl; Hematocrit of 25.6%; Leukocytes of 5600 / ml; Platelets of 362,000 / ml; Sodium of 129mEq / L; Potassium of 4.2mEq / L; Urea of 39mg / dl; Creatinine 0.3mg / dl; 39U / L TGP; Amylase of 64, Alkaline Phosphatase of 164UL, GamaGT of 140U / L and PCR of 76.62mg / dl. Parasitological Research in Feces for Entamoeba was positive (presence of cysts).

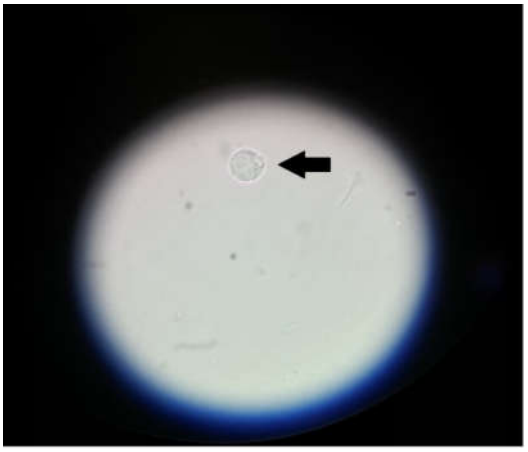

Figure 4 PPF. Arrow: Entamoeba sp. cyst.

Abdominal computed tomography showed liver morphologicaly normal, dimensions and contours, and with multiple nodular and hypoattenuating masses disseminated in the hepatic lobes, suggesting a metastatic process.

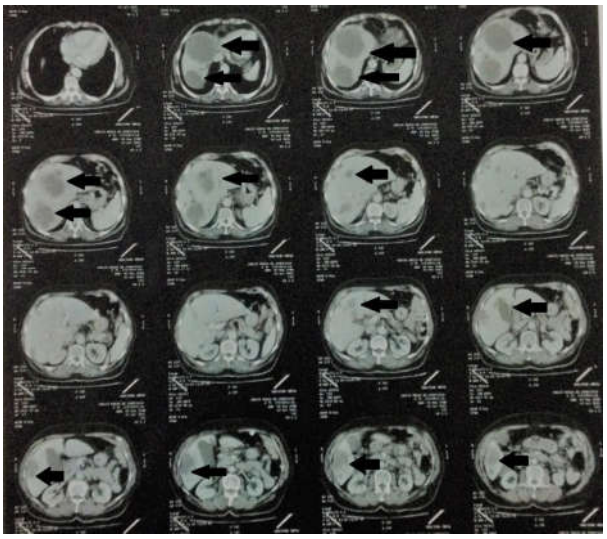

Figure 5 Computed tomography of the chest and abdomen. Arrows: multiple nodular images, suggesting metastatic process.

Colonoscopy revealed a vegetative and ulcerated lesion covered by fibrin in the ascending colon, immediately after the hepatic angle, occupying 50% of the organ luminal cavity. Patient with suspected right colon neoplasia with hepatic metastasis, staging performed at a second hospitalization; and diagnosed with amebic liver abscess.

Taken conduct was administration of Metronidazole 500 mg IV each 8 hours for 15 days intrahospitalar and more 14 days domiciliary; oral Albendazole 400 mg each 12 hours for 9 days intrahospitalar and more 21 days domiciliary.

DISCUSSION

The signs and symptoms of the patients in the cases reported here are in agreement with what has been shown to be more frequent in previous studies[2,4,10], being abdominal pain in the upper right quadrant, hepatomegaly, fever, chills and tight, distended abdomen. Painful to superficial and deep palpation, in addition to jaundice and diarrhea, which had been reported in another study in the frequency of 4.17% of all complications[7]. In addition, analytically, as described in the literature[2,3,6,10,11], anemia, increased C-reactive protein (in the second patient) and leukocytosis (in the first patient) were observed, with the absence of eosinophilia. Contrary to that described, there was no increase in alkaline phosphatase, nor in AST and ALT.

The patient W.R.O. Fits the profile of higher frequency of this disease, since it is male and is in the age group of 30 to 50 years (it is 44 years old), besides presenting as risk factor the alcohol intake. The amebic liver abscess developed in it also goes according to the most common, since it is single, with a diameter greater than six centimeters, affecting the right hepatic lobe, in the upper front portion[4,6,10].

The female patient had a personal history of probable amoebic infestation (a region endemic for amebiasis), the characteristic clinical picture, the tomographic exams whose images were compatible with two types of lesions: secondary metastatic lesions and infectious lesions of the abscess type. But the great differential for the diagnosis was the parasitological examination of positive fresh stools, revealing the presence of cysts and amoebae in the patient's feces. The immunodeficient condition due to the neoplastic process, his personal history of

contact with endemic areas of amebiasis, clinical status and positive parasitological examination were fundamental in the diagnosis of amebic liver abscess.

Patient complications are also among the most frequent, and W.R.O. came up with pleural effusion and atelectasis which, as described by Jha *et al*, are the most common pneumopleural complications, mainly pleural effusion and atelectasis, accounting for 33.33% of the complications of amebic liver abscess. Chest X-ray may reveal pulmonary infiltrate in the right hemithorax, indicating pleural effusion[4], as shown in the image exams of this patient.

Currently, the ultrasound and computed tomography scans associated with the clinical manifestations of amebic liver abscess are the two main diagnostic methods, whose sensitivity ranges from 96% -100%[4]. Being the most used ultrasound, since it has a sensitivity varying from 92% -97%, and presents low cost, high availability, and high accuracy, being used not only with a diagnostic test, but also to monitor the evolution[7]. In this way, the puncture of the abscess is not necessary for diagnosis, since it presents more risks[4]. In addition, serological tests, although highly sensitive, are not very specific in endemic regions, since the individual may be an asymptomatic carrier of E. histolytica, or have already developed amebiasis and become cured. In this way, the diagnoses of the cases presented were made through the clinical symptoms of the patients and through ultrasonography, computed tomography and parasitological examination of feces, although this revealed amoebas in less than 20% of cases of amebian liver abscesses[6], which was positive, confirming the aetiology of the hepatic abscess in the case of the female patient who, although presenting multiple nodular images on computed tomography of the upper abdomen consistent with a metastatic process due to the ascending colon neoplasia, the hypothesis of the concomitant amebic liver abscess was raised due to its Clinical symptoms, a hypothesis confirmed by the previous parasitological examination of feces.

Although it is not possible to differentiate amebian hepatic abscess from pyogenic hepatic abscess, in these cases a differential diagnosis can be made, even if the contents of the abscess are not punctured, since both patients are residents of an endemic country for amebiasis and because one of the patients fit into the sex and age group of higher risk, besides having the right lobe and being a single abscess, and the other patient having as a symptom diarrhea, pointing to amebic liver abscess and against pyogenic's. This hypothesis was confirmed by the parasitological examination of feces and the good response to treatment with mebendazole in both patients[10,13].

The recommended treatment for cases of hepatic abscess is isolated chemotherapy, the drug of choice is metronidazole, without the need for puncture, either by needle or by catheter. Several studies have shown that there are no advantages between the percutaneous drainage of the abscess associated with metronidazole treatment or only treatment with this same drug, even in large abscesses. Thus, percutaneous drainage should be reserved for specific cases in which there is no improvement in symptoms and abscess with the use of metronidazole alone, or when the abscess is suspected to be pyogenic and non-amoebic, or in abscesses with high risk of rupture into the peritoneal or pericardial cavities (such as those located in the left lobe or greater than 10 cm)[4]. Metronidazole should be used 750mg orally three times a day for seven to ten days. After treatment of invasive amebiasis, 40% to 60% of patients keep protozoal cysts in the colon, so it is essential to continue treatment with an intra-luminal active agent, since metronidazole does not have the ability to kill Trophozoites and the cysts in the intestine. Therefore, iodoquinolone 650 mg orally three times a day for 20 days may be used, or paramomixin may be used orally 25 mg / kg / day untill 35 mg / kg / day, divided into three doses per day per seven days. The cure rate with the use of metronidazole is 90%, ending fever and pain within 72 to 96 hours[2,4]. The treatment used in the reported cases was the use of metronidazole at a dose of 500 mg intravenously every 8 hours for more than 10 days, associated with mebendazole and ceftriaxone in one case and albendazole in the other, there was no need to perform percutaneous drainage for diagnosis or treatment, since both patients responded to clinical treatment with improvement of symptoms.

As amebiasis is an endemic disease in developing countries due to poor hygienic and sanitation conditions, and its transmission is via fecal-oral route, especially through contaminated food and water, a way to try to reduce the incidence of this parasitosis and its complications, mainly of amoebic liver abscess, is through public health measures, such as improvements in sanitary conditions, basic sanitation, water and food hygiene, and control of drinking water quality.

CONCLUSION

Both reports have shown that clinical investigation (history, characteristic signs and symptoms) coupled with a simple but well-defined and well-applied armed clinical trial and isolated clinical therapy are sufficient and effective in the diagnosis and treatment of amebic liver abscess. The literature recommends the clinical management of the disease, offering the patient antiparasitic drugs (associated or not with antibiotics) and keep the surgical treatments for specific cases like pharmacological treatment faillure, very large abscesses with risk of rupturing or pyogenic abscesses.

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