

Hepatic Abscess: Presentation of Two Cases Hepatic Absceso: Presentation of Two Case Reports

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DOI: 10.31080/ASGIS.2022.05.0435

Received: May 10, 2022

Published: May 27, 2022

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Abstract

Amoebic and/or pyogenic liver abscess is a localized process of encapsulated supplicative material. Although it is associated with figures of mortality 2-12%, figures that are increasing perhaps due to the delay in diagnosis or treatment [1]. Amoebic liver abscess is the most common form, the most endemic areas are tropical, subtropical countries [2]. Risk factors are associated with male gender, third and fifth decade of life, alcoholism, oncological diseases, immunosuppressants.

Se classify according to their anatomical location, segment or depth, number of single or multiple lesions, portal, biliary, contiguous infection pathway. Infections are usually caused by bacteria or amoebas, although they can be caused by *Equinococcus* and fungi. Amoebic liver abscess and pleural empyema are serious complications of intestinal amebiasis, as well as opportunistic bacteria, requiring pharmacological treatment or surgical drainage. The amoebic liver abscess is the invasion of the liver, from an intestinal focus by *Entamoeba histolytica*, is produced by hematogenous dissemination, through emboli through the portal vein is 7 to 10 times more common in adult males [3].

Pyogenic liver abscess, bile duct infections such as cholangitis and cholecystitis is the most frequent cause, among other pyogenic cholangitis, intrahepatic lithiasis, parasite infections in the bile duct, in fewer incidences underlying diseases such as diverticulitis, perforated or penetrating peptic ulcer, endocarditis, foreign bodies in the wall of the colon [4]. The preferred location is in the right lobe, as a result of greater blood flow, the lesions can be single or multiple.

Keywords: Amoebic; Percutaneous Drainage; Mortality; *Klebsiella Pneumoniae*

Introduction

Clinical case

The following case is a 59-year-old patient with a history of diabetes mellitus with metformin intake of 1000 mg each at the time of his reactive active admission oriented in time and space with a clinical picture of 6 months of evolution characterized by abdominal pain of an intermite nature, of greater intensity in the right hypochondrium, exacerbating a week ago with jaundice, higher thermal rise 38, nausea and vomiting. on physical examination ventilated pulmonary fields, rhythmic heart sounds do not murmur, globular abdomen, pain on superficial and deep palpation valued by the surgery service that indicates percutaneous drainage, for being apparently a mixed image in ultrasound view. CT chest simple posterior pleural laminar fluids. tomographic slices passing through the supperioral abdomen show a large hypotensive lesion in the right lobe of the liver to correlate with liver abscess. Subsequently the patient continues with febrile events is observed little drainage debit and even persistence of abscess use of norepinephrine vasopressor that incurs with septic shock is decided drainage in the open sky with surgical findings of exploratory laparotomy, drainage of hepatic abscesses liquid ascitic in small quantity, liver nodules of approx 2 cm in segment 5, plastron in omentum major in segment 5, with approximate amount of 700 ml, at the level of segment 7 intrahepatic collection approximately 300 ml purulent liquid, gallbladder with thickened walls purulent liquid, peritoneal fluid culture. negativo, liver tissue culture, Klebsiella Pneumoniae. with antimicrobial coverage metronidazole 500 mg every 8 hours - meropenem 1 g every 8 hours with good evolution 10 days after surgical procedure, cavity drains removed, patient discharged in better clinical conditions.

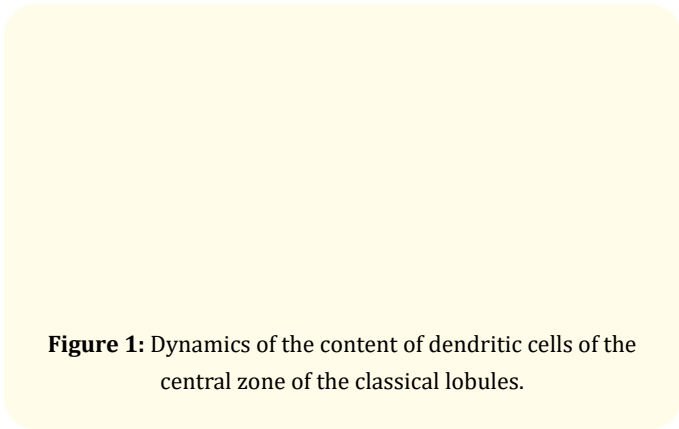


Figure 1: Dynamics of the content of dendritic cells of the central zone of the classical lobules.

Haematology	1	2	3
Lab Sequence	1	2	3
Leukocytes	11.26	18.92	8.3
Hemoglobin	10.8	9.5	10.5
Hematocrit	28.3	26.3	32.3
Platelets	444	407	416
PCR		208	85
Procalcitonin		50.3	0.83
Urea	19	10.82	
Creatinine	0.7	0.7	0.9
Total bilirubin	1.2	0.6	
Direct bilirubin	0.8	0.4	
Ast transaminasa	121	94	27
ALT transaminasa	98.5	30	25
Albumin		2.42	3
Amylase	140		60
Lipase	206		75
Sodium	126	135	137
Potassium	4.33	3.75	3.68
Chlorine	93.3	100	102

Table 1

Patient 39 years with a personal history of penicillin allergy, surgical history of laparoscopic cholecystectomy one week before the clinical picture characterized by abdominal pain, located in the masogastric subsequently diffuse intermittent accompanied by thermal rise 39 on several occasions. Abdominal ultrasound is observed heterogenic image of irregular edges of 80 x 50 mm, cholecystectomized, Chest CT con evidence of right pleural effusion approximately 300 ml, liver collection segments III, IV, V. by clinical picture was initiated antimicrobial coverage treatment of metronidazole 500 mg every 8 hours together with meropenem 1 g every 8 hours. Subsequently, percutaneous drainage with a pictail catheter was decided, with a debit of approximately 800 ml. Growth in culture of Klebsiella pneumoniae, con good evolution and gradual remission of the abscess.

Discussion

Liver abscesses are pathological entities of considerable clinical importance due to their morbidity and mortality process, especially in countries in conditions of extreme poverty, nutritional scarcity and poor eating habits. The incidence of liver abscesses varies 2.3

Haematology		
Lab Sequence	1	2
Leukocytes	10	4.4
Hemoglobin	8.9	10.7
Hematocrit	24	31.8
Platelets	636	
PCR	123	13
Urea	15	18
Creatinine	0.6	0.7
Total bilirubin	0.7	0.4
Direct bilirubin	0.3	0.2
Ast transaminasa	45	51
ALT transaminasa	38	67
Albumin		2.48
Sodium	132	
Potassium	5.39	
Chlorine	98	

Table 2

Figure 2: 1. Pleural effusion, 2. Presence of coronal view liver abscess, 3. Sagittal view liver abscess.

Figure 3: 1. Presence of pictail drainage. 2. Coronal view 3. Sagittal vision liver abscess.

cases per 100,000 hospital admissions, in Taiwan it ranges from 15 to 275 per 100,000 hospitalizations. Liver abscesses, whatever their origin in diabetic patients, are associated with higher mortality [6], among other causes of liver abscesses have varied over time, being associated with secondary pyelophitis appendicitis, due to septic thrombosis of the portal vein.

Amoebic liver abscesses are regularly secondary to colonization and invasion of the intestinal wall by *Entamoeba histolytica*, these occur most often in the right lobe since it receives its greater irrigation from the venous drainage of the ascending colon and the cecum. Abscesses can be acute or subacute with an average age of middle age, without gender preference, their symptomatology regularly presents thermal elevation, pain in the right hypochondrium, history of cholelithiasis [5].

On the other hand, in pyogenic abscesses it is a pathology with a mortality rate up to 100% when no diagnosis and timely treatment is made, its incidence varies between 15 cases of 105 inhabitants each year in countries of poor health conditions more to men than women, its death Ality ranges from 15 to 20%, in this group indicate poor prognosis if patients have the following characteristics development of sepsis, polymicrobial, antibiotic resistance, patients over 70 years, which are associated immunosuppressive neoplasms in these cases there are several episodes of bacteremia of the portal vein, which are related by intestinal leakage or peritonitis pictures, or bile duct infections, biliary lithiasis, ampullary tumors, colorectal tumors that may occur in 40 to 60% of cases. (HUANGCJ, 1996). They can also occur due to simple or penetrating surgical wounds, migration of foreign bodies, in septic processes that may be secondary to bacteremia or foci of endocarditis intravenous drug users, women with pelvic inflammatory disease that sends emboli to the liver thus causing such liver abscesses [6,7].

As sociodemographic characteristics, liver abscesses are predominantly masculin sex in a ratio of 79%,in addition alcohol consumption is associated with up to 54%, the use of proton pump inhibitors as a gastric acidity suppressor drug was associated as a precursor to developing pyogenic liver abscess as identified in a study in Taiwan 2017 with a population of 1372 patients (Lin Liao, Chang 2017), one of the pathologies with the greatest association with complications is Diabetes Mellitus, which is identified up to 44.3% [4].

Clinical manifestations depend on the pathogen, clinical symptoms characterized by pain in right hypochondrium between 89

- 100% with or without hepatomegaly 51 - 92%, fever 67 -100% chills 33 - 88%, jaundice 23 - 43% associated with concomitant biliary disease, abscess cultures and blood cultures are identified in more than 30 to 60%, with most common aerobic organisms great negative *Escherichia coli*, *Klebsiella pneumoniae* Enterobacter, *Pseudomonas*, Bacteria between 35 to 45% among these Bacteriodes, spp, *Fusobacterium*, *Clostridium* spp Gram-negative aerobic bacteria *Staphylococcus aureus*, the latter can trigger infective endocarditis. It has been shown that *Klebsiella pneumoniae* serovariedad K1, is one of the causes of producing the primary liver abscess with a high rate of blood dissemination with a report of up to 11 to 30% mortality, abscesses of fungal origin are of very low incidence which are evidenced in immunocompromised individuals, with chemotherapy treatment [8,9]. In both cases *Klebsiella pneumoniae* was isolated, which are very often pathogenic in liver abscesses.

Its clinical presentation is nonspecific can also occur, vomiting, between 30 to 60% of patients can feel the mass in right hypochondrium its size ranges from 5 to 15 cm reaching giant abscess of 30cm Rocío Iglesias 2018, [9]. The symptomatology can manifest between two to three weeks, the most frequent cardinal sign is the thermal rise up to 90% in cases, jaundice between 30 to 50%, weight loss occurs between 32 to 51%, pleural effusion, consolidation in 25%, splenomegaly 10%, ascites in 25%, encephalopathy up to 6%. between complications the liver abscess destroys the liver parenchyma and are located under the diaphragm can perforate and penetrate the pleural cavity repercussion with abscess or pleural empyema [10,11], in both cases of the patients it is evident as a cardinal point thermal rise and pleural effusion the latter more established in the second case that gives much to the clinical suspicion.

As a tool for the diagnosis of liver abscesses there are several alternatives, imaging studies such as chest x-rays can show elevation of hemidiaphragm and atelectasis, ultrasound, CT computed tomography. MRI magnetic resonance imaging, images can be determined accurately, Nuclear Medicine including the use of radioisopos ($Tc-99$, Gallium) that allows to observe the hot spots of the abscess although unlike CT or MRI is not a better option since its sensitivity goes between 50 to 80% [7], accurate imaging can be determined, the determination of antibodies of body fluids such as saliva, serum, drainage fluid, as well as endoscopic study, recto sigmoidoscopy to visualize the shirt button, biopsy in search of trophozoites can be assessed. All aspiration sample should be sent for Gram staining, aerobic culture, anaerobe, fungi, myco bacteria,

polymerase reaction test or PCR antigen for detection of *Entamoeba histolytica* with a sensitivity of 97%. And in areas with a high prevalence rate of *Entamoeba histolytica* infections at an average of 35% [5,4,12].

Among the serologic processes to determine intestinal extra amebiasis we find the following tests: immune diffusion that is determined as an antigen-antibody reaction, hemagglutination with an effectiveness of 99% and sensitivity that reaches up to 93%, ELISA. antigen test - IgG antibody, IgM, IgA, standardized test, low cost, available with positive values of 0.34. this test determines whether the liver abscess is amoebic or pyogenic. Several cytokines can be determined in experimental studies, IL-4, IL 10, TGF-B, are one of the tests in humans with symptoms of intestinal amebiasis. The pace of advancement of immunology guarantees the phase of medical practice [5,13]. In relation to differential diagnoses, inflammatory psudotumor, regenerative nodular hyperplasia that is evidenced as multiple lesions, can be determined [14].

Treatment can be directed either to antimicrobial coverage or aimed at amoebic liver abscess metronidazole with an effectiveness of 95%, which exceeds aerobic and anaerobic infection, once confirmed the diagnosis of amoebic abscess should be followed with metronidazole and if it is revealed pyogenic continue with antimicrobials [15], before Failure of medical treatment is indicated surgical resolution, or drainage that regularly is through percutaneous aspiration or open drainage, may also be directed to associated comorbidities [2,16] in our first case of could determine progress to septic shock with use of amines and surgical indication and antimicrobial coverage with carbapenem.

Basnuevo and Sotolongo 2019 dcc, write local treatment of the abscess cavity based on chloroquine as amebicide leaving in place a solution of chloroquine 5% 5 ml, penicillin 500000 IU, Streptomycin 0.50 g, physiological serum 20 ml, according to the symptomatology as the thermal rise can be observed its decrease after the third day of the application, this technique must be monitored and the patient is evaluated for his determination of cure [17].

The technique that is most used and recommended is the Seldinger technique with effectiveness has 89%, the guide that is mostly used in this technique is guided ultrasound in order to reduce radiation exposure to health personnel or of the patient, on the other hand the tomography guide should be used in more complex collections that need greater accuracy in the anatomical relationships and avoid the possibility of complications [18].

Conclusion

The correct and timely clinical suspicion is the key to the diagnosis of amoebic and/or pyogenic liver abscess in order to give targeted treatment and identify the origin and reduce the incidence of morbidity and mortality in this population group with this type of pathology, identify the symptoms and the sociodemographic relationship. Establish the type of treatment, pharmacological, minimally invasive such as the placement of guided drainage with ultrasound and even drainage by laparotomy, all this for the survival and recovery of the patient.

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