

# Rare Cases of Ascites and Pregnancy: experience obstetrics and gynecology department II Fez

Z. Tazi, S. Boumaaza, S. Jayi, F-Z. Fdili, H. Chaara, M.A. Melhouf

Gynecology-Obstetrics Department II – CHU Hassan II- Fez -Morocco

**Abstract:** Ascites is fluid effusion from the peritoneal cavity excluding the purulent (peritonitis), purely bloody (hemoperitoneum) or bilious effusions. Its occurrence in pregnant women is a rare clinical presentation. We report two clinical cases of ascites observed in two pregnant patients. Their symptomatology was dominated by dyspnea, abdominal distension and edema of the legs. The etiologies were for one severe preeclampsia associated with liver cirrhosis and the other tuberculosis. Several ascites punctures were performed thus as the use of diuretics and beta blockers to reduce abdominal distension. Correction of anemia was achieved by iron supplementation and transfusions of blood. The deliveries were carried out vaginally for one of the patients and by c section for the other parturient. The clinical evolution of patients and that of their new-borns was favorable after several days of hospitalization.

## **Introduction :**

Ascites is an accumulation of fluid in the peritoneal cavity. Distension abdominal pain, weight gain, shortness of breath, nausea and vomiting are common most common symptoms. The most common causes of ascites are disorders related to portal hypertension, liver diseases such as cirrhosis, alcoholic hepatitis and congestive heart failure, constrictive pericarditis.

Other causes include those related to hypo-albuminemia, such as Nephritic syndrome. All of these pathologies often have a poor prognosis.

Ascites in pregnant women is a rare phenomenon, serious because of the risk of vaginal, urinary and malaria infections favored by the pregnancy state, to which Added to this are the complications generated by the etiology of the ascites itself. Taking into account The burden of ascites in pregnant women is delicate. Once diagnosed, treatment would begin with the relieving of dyspneic emergency, created by abdominal distension ascites associated with the gravid uterus. It is then that the etiological research will follow on with the prognosis is largely dependent.

## **II- Presentation of cases:**

### **Case 1:**

This is Mrs. F.H aged 43, a multiparous woman (6th gesture, 5th parous: 3 children alive / vaginal delivery without incidents, 1 child c section for transverse presentation), Current spontaneous pregnancy not scheduled, contracted on pill no antenatal checkups, is estimated at 8 months, no screening of ongoing diabetes. marked by the occurrence in the 2nd trimester of hematemesis made of red blood on exertion of cough without melaena or other associated digestive signs not explored (no liver ultrasound, nor EOGD) with the discovery 3 months ago of ascites of great abundance of gradual installation without pain or fever otherwise no metrorrhagia, no high blood pressure, negative infectious history motivating her consultation for respiratory difficulty with abdominal distension and was hence hospitalized.

she benefited from an evacuation puncture of her ascites of more than 3l with a transfusion by 1 pellet of red blood cells, realization of a 24-hour proteinuria on diuresis of 560cc returned positive at 0.47g/dl, then was referred to our establishment for treatment. on clinical examination the patient was conscious, general condition preserved, dyspneic with a respiratory rate of 35 cycles/min; hypertensive at 17/10 cmhg; HR 100 Bpm; Afebrile; Discolored conjunctiva, no jaundice, Labstix with 3 crosses, Presence of bilateral pitting oedema reaching up to the knees, non-precise pre-conception weight, with a very distended abdomen covered with oedema, presence of collateral venous circulation, puddle sign positive (image1).

Obstetric examination: The uterus is difficult to palpate, the fundal height is difficult evaluable. The active movements of the fetus perceived by the patient. Cardiac and pulmonary auscultation was normal as well as the examination of the other systems. In light of this clinical picture the main differential was an obstetric cause (Severe pre-eclampsia: view of BP and proteinuria positive in the third trimester associated with ascites probably secondary to liver cirrhosis given the digestive symptoms

Our therapeutic conduct included the hospitalization of the parturient and the conditioning (semi-sitting position + oxygen therapy), carrying out a biological assessment for pre-eclampsia with liver assessment: anemia at 8.9 g/dl hypochromic microcytic,

no thrombocytopenia normal blood count, liver test: no cytolysis with cholestasis TB 2xN and DB a 7xN, good renal function, lonogramme: albumin decreased to 23. LDH 342.

Abdominopelvic ultrasound revealed abundant ascites, moderate splenomegaly with dysmorphic liver cirrhosis and signs of portal hypertension, and a progressive single-fetal pregnancy of 33 weeks without any malformation or detectable fetal anomaly, homogeneous placenta and normal uterine and umbilical Doppler. Normal chest x-ray. The biological research for the (HBsAg) antigen was positive, the anti-HCV antibody was negative.

During her hospitalization, the parturient benefited from several ascites evacuations. Cytological examination reveals a transudate with an albumin level greater than 11 and the culture was also sterile. A EOGD was carried out showing varicose veins stage II esophagus without red sign and without portal hypertension gastropathy (image

2). Antihypertensive treatment was immediately started associated with diuretics and beta blocker + antenatal corticosteroid therapy. Her condition improved within 48 hours of hospitalization by the disappearance of dyspnea. After 2 weeks of hospitalization the patient went spontaneously into labor and delivered vaginally a live male child.

The clinical examination of the newborn was unremarkable. He was admitted to neonatology for respiratory distress due to prematurity, having received a dose of steroids. After clinical improvement, the patient was declared discharged with follow-up in gastroenterology for exploration where she benefited from a fibro scanner currently under anti-HBV treatment with good compliance and good improvement.



**Image 1:** Abdominal examination of patient case 1



**Image 2:** varicose veins stage II esophagus

### Case 2:

This is Mrs. C.M aged 42, G2P0: 1 spontaneous miscarriage without curettage, having a history of a myomectomy on two occasions (gynecological scar) , Current spontaneous pregnancy of 31 weeks + 3 days poorly monitored, no diabetes screening, no 1<sup>st</sup> trimester ultrasound, progress marked by the increase in abdominal volume from the start of the pregnancy otherwise no metrorrhagia, no high blood pressure, negative infectious history, no tuberculosis infection in the family, no concept hematemeses or melaena, referred for management of severe ascites associated with a cough. In whom clinical examination found: GCS 15, normotensive, with a fairly good general condition, slightly dyspneic, labstix negative, febrile at 38, with an abdomen distended, no collateral venous circulation, positive flank sign, assessment of the size of the spleen and liver difficult due to effusion (image 3).

Obstetric examination: The uterus is difficult to palpable, gravid with a fundal height that is difficult to assess. active movements of the fetus were well perceived by the patient. pleuropulmonary examination displayed rales on auscultation with decrease in vesicular movements. An abdominopelvic ultrasound showed: progressive single-fetal pregnancy, Estimated fetal weight 1300 with a Normal umbilical doppler, abundant ascites, liver of normal size and contour, with veins above permeable liver. Biological assessment finds thrombocytopenia, hepatic cytolysis with hypoalbuminemia, with a 24 hr Proteinuria positive, correct renal function, liver serologies: negative, TB sputum: positive. ECG without abnormality. ,the patient benefited from an antenatal corticosteroid dose with several evacuation punctures of her ascites, blood transfusions and injectable diuretics and anti-tuberculosis treatment. A planned cesarean delivery with an obstetric indication (double scarred uterus) at 38 weeks, of a new born in good condition entrusted to the family, declared discharged after clinical and biological improvement, the patient seen again in consultation having presented an improvement in her ascites.



**Image 3:** Abdominal examination of patient case 2

### **III-Discussion:**

Ascites during pregnancy can be caused by many conditions, the most common being pre-eclampsia, as it is also associated with proteinuria. Ascites in pre- Eclampsia is due to low protein serum with impaired ratio albumin-globulin; liver damage and hemoconcentration [1] .

The causes of ascites in pregnant women found in this study were hepatic cirrhosis associated with preeclampsia and peritoneal tuberculosis. The association of cirrhosis and Pregnancy is rare, its frequency is difficult to estimate [2]. It poses the problem of taking into account burden due to the effect of hemodynamic changes during pregnancy on cirrhosis and mainly on portal hypertension increasing the risk of digestive bleeding, the fetal-maternal mortality and morbidity [3]. Indeed, ascites is a rare complication of PH during pregnancy, due to increased abdominal pressure.

Esophageal varices (EV) were present in our patient. In fact, the complications of portal hypertension are estimated at around 50% in the literature and would increase the risk of maternal mortality and fetal death [4] . It is established that patients who benefited from treatment for their EV before their pregnancy had fewer complications during delivery and a lower rate of fetal mortality [5] . Cirrhosis was

of viral origin in our patient, it poses a real health problem regarding the future of newborns. Because it is reported in the literature that the risk of mother-to-child transmission of HBV was 80 to 90% when the HBsAg positive mother had DNA in her serum of HBV [6] . In all cases, it emerges from all these findings that when the patient is well followed and entrusted early to a multidisciplinary team made up of hepatologist, gynecologist obstetrician, pediatrician and intensivist, the fetomaternal prognosis is generally best.

The second etiology of pregnancy ascites was peritoneal tuberculosis. There has recently been a resurgence of the disease, probably due to many factors, including human immunodeficiency. The virus epidemic human immunodeficiency (HIV), drug addiction, poverty, homelessness, deterioration of health care infrastructure and the increase in the number of cases among people elderly. And the increase in the number of cases among immigrants. Tuberculosis therefore remains a health problem in developing countries. Thanks to the improvement of the conditions of life and the discovery of effective chemotherapy, the incidence of tuberculosis quickly decreases. Clinical manifestations of peritoneal tuberculosis: Fever, chills, weight loss and abdominal pain. Most patients require diagnosis further investigation due to prolonged, unexplained febrile illness, ascites, and elevated high of CA 125 [7]. This case of peritoneal tuberculosis, found is comparable to that of Alaoui et al. (2012) [8]. Peritoneal tuberculosis is also one of the causes of ascites in the study conducted at the Niamey Regional Hospital Center by Sanoussi H (2022) [9]. There sensitivity of computed tomography (CT) in predicting tuberculosis is 69%. Tuberculosis patients were likely to have changes mesenteric, macronodules (5 mm in diameter), splenomegaly and Splenic calcification on CT imaging [10]. The diagnosis and Early treatment of peritoneal tuberculosis during pregnancy is important to minimize adverse obstetric and neonatal effects.

#### **IV – Conclusion:**

We studied two clinical cases of ascites and pregnancy occurring in patients without notable pathological history. We found two causes of ascites associated with pregnancy, namely hepatic cirrhosis and peritoneal tuberculosis. Treatments received were symptomatic and etiological. The mode of delivery was according to the obstetric indication and the newborns were healthy. The immediate postpartum period was simple and the clinical outcome was favorable for mothers and their babies. Thus these 2 etiologies can cause dangerous complications that could affect the vital prognosis.

#### **References :**

- [1] A. Golden, « Ascites in pregnancy », *Am. J. Obstet. Gynecol.*, vol. 57, n o 2, p. 385-387, févr. 1949, doi: 10.1016/0002-9378(49)90442-1.
- [2] J. Tan, B. Surti, et S. Saab, « Pregnancy and cirrhosis », *Liver Transpl.*, vol. 14, n o 8, p. 1081-1091, août 2008, doi: 10.1002/lt.21572.
- [3] F. S. Benjaminov et J. Heathcote, « Liver Disease in Pregnancy », *Am. J. Gastroenterol.*, vol. 99, n o 12, p. 2479-2488, déc. 2004, doi: 10.1111/j.1572-0241.2004.30231.x.
- [4] I. Mikolasevic et al., « Liver Disease During Pregnancy: A Challenging Clinical Issue », *Med. Sci. Monit.*, vol. 24, p. 4080-4090, juin 2018, doi: 10.12659/MSM.907723.
- [5] N. M. Lee et C. W. Brady, « Liver disease in pregnancy », *World J. Gastroenterol.*, vol. 15, n o 8, p. 897, 2009, doi: 10.3748/wjg.15.897.
- [6] C. Lee, Y. Gong, J. Brok, E. H. Boxall, et C. Glud, « Effect of hepatitis B immunisation in newborn infants of mothers positive for hepatitis B surface antigen: systematic review and meta-analysis », *BMJ*, vol. 332, n o 7537, p. 328-336, févr. 2006, doi: 10.1136/bmj.38719.435833.7C.
- [7] S. Koc et al., « Peritoneal tuberculosis mimicking advanced ovarian cancer: A retrospective review of 22 cases », *Gynecol. Oncol.*, vol. 103, n o 2, p. 565-569, nov. 2006, doi: 10.1016/j.ygyno.2006.04.010.
- [8] « tbk.pdf ».
- [9] S. H. et I. N., « Cas Rares D'ascite et Grossesse au Centre Hospitalier Régional de Niamey », *Eur. Sci. J. ESJ*, vol. 8, août 2022, doi: 10.19044/esipreprint.8.2022.p303.
- [10] G. S. R. Lee, S. J. Kim, I. Y. Park, J. C. Shin, et S. P. Kim, « Tuberculous peritonitis in pregnancy », *J. Obstet. Gynaecol. Res.*, vol. 31, n o 5, p. 436-438, oct. 2005, doi: 10.1111/j.1447-0756.2005.00316.x.