

Ascites in 2nd Trimester Pregnant

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Case Report

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Abstract

Ascites is a collection of fluid in peritoneal cavity. Abdominal distention, weight gain, shortness of breath, nausea and vomiting are most common presentation. The most common causes of ascites are Disorders related to portal hypertension as liver diseases such as cirrhosis, alcoholic hepatitis and congestive heart failure, constrictive pericarditis. A 34 year female, G3P2A0, 17 week pregnant presented to Antenatal Care Clinic for regular checkup, complaining of rapid weight gain, generalized swelling, particularly; abdominal swelling and dyspnea attacks. The patient had history of hypothyroidism on thyroxin treatment, preeclampsia in previous pregnancy. By exam, the patient seemed to be fatigued with generalized edema, lower limb edema, abdominal over distention with normal fundus size and difficult to palpate fetal parts. Ultrasound show free fluid in peritoneal cavity suggesting ascites.

Keywords: Ascites; Hypoalbuminemia; Glomerular Filtration

Introduction

Ascites is a collection of fluid in peritoneal cavity. Abdominal distention, weight gain, shortness of breath, nausea and vomiting are most common presentation [1]. The most common causes of ascites are Disorders related to portal hypertension as liver diseases such as cirrhosis, alcoholic hepatitis and congestive heart failure, constrictive pericarditis [2].

Other causes include those related to hypoalbuminaemia as nephritic syndrome and protein-losing enteropathy. Ascites could be associated with miscellaneous conditions as myxedema and ovarian tumors [1,2].

Albumin is an acute-phase protein, synthesized by the liver. It is responsible for transport of various substances

as fatty acids and hormones, it has an anti-thrombotic effect and it is essential in the maintenance of normal plasma colloid oncotic pressure [3,4]. Hypoalbuminemia is related to increase morbidity, short-term mortality and length of hospital stay and to more complications [5,6].

Nephrotic syndrome is a condition that causes the kidneys to leak large amounts of protein into the urine, more than 3.5g/24hr with hypoalbuminemia less than 30 g/L; this can lead to a range of problems, including swelling of body tissues and increase the risk for infections. Hyperlipidemia and thrombotic disease could be seen, too [7,8]. So the patient may experience weight gain, edema of the legs, feet, ankles and less often in the hands or face, fatigue, foamy urine, loss of appetite [2,7,8].

Most children with nephrotic syndrome could have remission period followed by relapses periods. Usually,

relapses become less frequent as they get older and could be a disease free in late teens [8].

Nephrotic syndrome could lead to urinary loss of hormone-binding proteins. So, significant increase in urinary excretion of T₃ (triiodothyronine), (tetraiodothyronine) T₄ and (thyroid-binding globulin) TBG could lead to emerge of clinical hypothyroidism [2,8,9]. Since proteins in human body can be affected by various ways as it is mentioned in a case report by RJK Al-Ameri [10].

Case Presentation

A 34 year female, G3P2A0, 17 week pregnant presented to Antenatal Care Clinic for regular checkup, complaining of rapid weight gain, generalized swelling, particularly; abdominal swelling and dyspnea attacks. The patient had history of hypothyroidism on thyroxin treatment, preeclampsia in previous pregnancy. By exam, the patient seemed to be fatigued with generalized edema, lower limb edema, abdominal over distention with normal fundus size and difficult to palpate fetal parts. Ultrasound show free fluid in peritoneal cavity suggesting ascites (Figure 1).

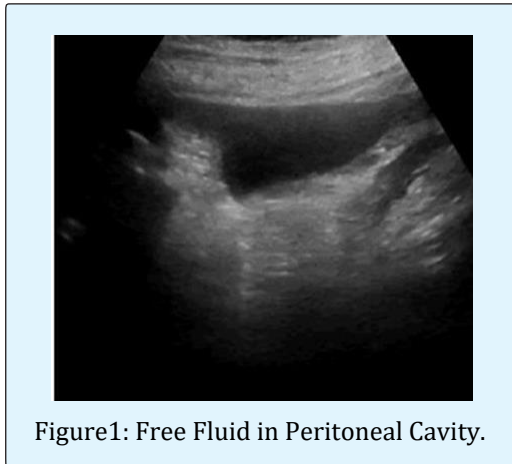


Figure1: Free Fluid in Peritoneal Cavity.

The patient is on a large dose of thyroxin, 250 microgram; to control her hypothyroidism, as she had normal T₃, T₄, and TSH in lab test with the current dose (Tables 1 & 2). She had normal blood urea and serum creatinine with slight decrease in glomerular filtration rate; 68 mg/m mol, normal complete blood count and normal liver enzymes with marked decrease in serum albumin; 1.1 g/dl, massive albuminuria in urine test and marked hyperlipidemia in lipid profile. Blood pressure is 110/65.

Test name	Result	Normal values
Color	Yellow	
Aspect	Turbid	
Volume	Voided sample	
Reaction	6	4.7-7.8
Specific gravity	1.005	1.005-1.025
Nitrite	Nil	Not detected
Albumin	+++	Not detected
Sugar	Nil	Not detected
Aceton	Nil	Not detected
Bile salts	Nil	Not detected
Bile pigments	Nil	Not detected
Urobilinogen	Normal trace	Normal trace
RBCs	4-Feb	0-1
Pus cell	6-Apr	0-1
Epithelial cells	Few	
Casts	Nil	
Crystal	+ urate crystal	
Others	Nil	

Table 1: General Urine Exam.

Serum	Results	Normal range
Cholesterol	9.9	5.43 mmol/l
Ttriglyceride	2.78	1.10 mmol/l

Table 2: Lipid Profile.

Childhood records revealed that the patient had nephrotic syndrome in early life and went through a remission period since age of six years. Obviously, the pregnancy triggered the disease once again showing a picture of adult nephrotic syndrome. With a consultation with nephrologist, prednisolone tabs is administered at a dose of 2mg/kg/day. Normal urine and serum albumin is resumed with other lab tests. Ascites resolved gradually with improving the general condition. The required dose of Thyroxin is decreased gradually to 25 microgram per day and then the patient got a euthyroid state, so thyroxin treatment is ceased. Pregnancy continued smoothly.

Discussion

Ascites in pregnancy could be due to many conditions, the most common one is preeclampsia as it is associated with protein urea, too. This is mentioned in a case report done by Abe Golden.¹¹ Ascites in preeclampsia is due to low serum protein with alteration in the albumin-globulin ratio; liver damage and hemoconcentration [11]. Even though, the patient in the current case had history of preeclampsia in previous pregnancy and protein urea in

the recent pregnancy but the patient had normal blood pressure and normal liver enzymes that make liver disease as a possible cause of ascites is far away, too, since the patient had no signs and symptoms of liver disease, as well, even she had hypoalbuminemia that could occur in liver disease and leading also to ascites [12].

The patient had a picture of nephrotic syndrome that caused the ascites due to hypoalbuminemia but pregnancy may cause a misleading. Since the patient had proteinuria, hypoalbuminemia, hyperlipidemia and edema [7].

The patient had a nephrotic syndrome in early childhood and remission for long period is achieved but unfortunately, pregnancy induce relapse since a state of immunosuppression is associated with pregnancy that may lead to elicit medical conditions [13].

Excessive protein loss in urine in nephrotic syndrome, leading to a loss of T3 and T4 in urine, which caused a state of hypothyroidism [9]. By cortisone treatment, the patient resumed gradually the euthyroid state.

Conflict of Interest

The authors have no conflicts of interest.

Ethical Approval

Ethical approval is obtained.

Consent

Consent is obtained.

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