



## Pre-eclampsia and Ascites: A Case Report

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Article History	Abstract
Received: 06 July 2023 Revised: 15 Sept 2023 Accepted: 08 Oct 2023 Published: 12 Oct 2023	<i>Pre-eclampsia is a life-threatening disorder with variable presentation. The condition is known to increase maternal morbidity and also contributes to significant proportion of maternal mortality. The pathophysiology of the syndrome is characterised by increased endothelial permeability and microvascular damage. But the presence of fluid in various body cavities is rarely seen in preeclampsia and the presence of the same is associated with increased maternal morbidity. This case was one in which the patient had fluid collection in multiple body cavities. The patient had no history of hypertension.</i>
CC License CC-BY-NC-SA 4.0	<b>Keywords:</b> Pre-eclampsia, Ascites, Case study, hypertension

### Introduction

#### Case report

36 years old pregnant women with no history of hypertension was admitted to the hospital. The woman was 28 weeks pregnant and was regular in her antenatal check-up. The blood pressure reports were normal till 25 weeks of pregnancy. The 1<sup>st</sup> trimester and 2<sup>nd</sup> trimester ultrasound reports were corresponding to period of gestation.

The examination of the patient showed blood pressure recording of 180/100 mm Hg and proteinuria. A complete blood count (haemoglobin, platelet count), blood urea, serum creatinine, bilirubin, albumin, ALT, AST were done where albumin level was low. She was given double dose of Nifedipine 20 mg.

Doppler study revealed liquor volume (AFI= 63 mm) and there is increased resistance flow in umbilical and uterine artery with high PI value. PI value of umbilical artery was 1.66 and PI of uterine artery was 1.24. Mean PI=1.68. Consequent studies showed UA had absent diastole with early reversal. Chronic uteroplacental insufficiency with cerebral autoregulation was detected. Maternal ascites was detected and fluid filled cavities were noted. Due to this, emergency C section was performed after 4 days observation. A live 900 gms male baby was delivered which was immediately shifted to NICU. After delivery the patient complained of severe abdominal pain.

X ray studies showed gas filled distended bowel loops likely due to adynamic ileus. Postoperative period was uneventful. The patient was started on IV fluids, pantaprezol infusion. Her BP levels was 140/90 mm Hg. Nifedipine 20 mg as continued. After 3<sup>rd</sup> day of operation urine albumin was nil and blood albumin were 2.6 gm/dl. On 5<sup>th</sup> day of operation, the patient was discharged. In the day of release her BP level was 130/90 mm Hg, she was suggested to continue medication. She was instructed for weekly follow up. She became normotensive after 6 weeks. Visual problems were also recorded as the patient complained of blurry vision after weeks of operation. Fundoscopy was done and the eye symptoms regressed after 6 weeks.

## Discussion

Preeclampsia complicates approximately 2-8% of all pregnancies and is an important cause of maternal morbidity and mortality. Ascites and preeclampsia is a rare complication. Massive ascites is an unusual complication of preeclampsia which may lead to maternal respiratory compromise which may lead to termination of pregnancy within 24 – 48 hours as it cannot be cured by medical treatment. Although the cause of ascites in preeclampsia is unclear. Most probable explanation is generalized capillary leak due to endothelial cell dysfunction and reduced oncotic pressure<sup>2</sup>. It is this low colloid osmotic pressure that results in effusion such as ascites<sup>3</sup>.

Many cases of preeclampsia with ascites have been recorded in the form of case reports<sup>4,5</sup>. In a 11-year study of 23 patients with pregnancy induced hypertension (PIH) and ascites, Long and Wang found that the incidence of ascites was 21.6 in 1000 in severe PIH and the presence of this condition led to termination of pregnancy as it cannot be cured by medical treatment<sup>5</sup>. Vaijanth et al estimated the incidence of ascites in preeclampsia as 1/1000 in their report<sup>6</sup>. In a study conducted in 2019 by Mbonyizina C et al out of 106 patients with severe preeclampsia 46 had ascites on ultrasonography<sup>7</sup>. Whole abdomen study should be done when ascites is found intraoperatively to rule out intraperitoneal tumors. The clinical course of this case indicated that the underlying cause of the massive ascites was preeclampsia. The amount of ascites decreased after hypertension and proteinuria resolved.

## Conclusion

Careful ultrasonographic examinations are necessary to detect massive ascites in pregnancy. The incorporation into clinical practice of evaluating the amount of ascites in patients with preeclampsia might prompt the obstetrician to more intensive and more frequent maternal and fetal surveillance to avoid maternal and fatal complication.

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## Conflict of interest: Nil

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