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RESEARCH ARTICLE

AN UNUSUAL CASE OF ANASARCA AS A CONSEQUENCE OF POST LSCS UTERINE SCAR DEHISCENCE

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ABSTRACT

Introduction: Anasarca, or generalized edema, occurs due to fluid accumulation in body tissues and is often associated with systemic conditions. Uterine scar dehiscence, a rare complication of cesarean section, typically presents with abdominal pain or bleeding, but cases with anasarca are extremely rare. This report aims to highlight an unusual presentation of uterine scar dehiscence manifesting as anasarca. ***Case Report:*** A 21-year-old woman, 20 days postpartum after a lower segment cesarean section (LSCS) and tubectomy, was admitted with abdominal distension, bilateral lower limb swelling, and shortness of breath. Physical examination revealed generalized edema. Initial diagnostic workup considered postpartum cardiomyopathy, which was later ruled out via echocardiography. Imaging studies identified free fluid in the abdomen and thorax, and a CT scan confirmed uterine scar dehiscence with peritonitis. Management included diuretics, antibiotics, and subsequent surgical repair. The patient showed significant improvement and remained stable at follow-up. ***Conclusion:*** This case underscores the importance of considering uterine scar dehiscence in postpartum patients with unexplained edema. Timely diagnosis and intervention are crucial, as uncommon presentations like anasarca may complicate the clinical picture. Clinicians should be vigilant in assessing postpartum patients with generalized edema to ensure prompt and effective treatment.

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INTRODUCTION

Anasarca, derived from two Greek words—ἀνα- (ana-, "up to, thoroughly") + σάρξ (sárx, "flesh, body")—is strictly an edema or dropsy of the tissues, an infiltration of serum into the spaces of the connective tissue. Anasarca occurs when systemic conditions disrupt the equilibrium between the hydrostatic and the oncotic pressure gradients across capillaries, thus leading to increased capillary hydrostatic pressure, decreased plasma oncotic pressure, increased capillary permeability and/or lymphatic obstruction [(1)]. The differential diagnoses of anasarca include any condition that can lead to widespread severe edema including heart failure, kidney diseases including glomerular pathologies (e.g., Iga nephropathy, glomerulonephritis, and nephrotic syndrome), autoimmune disease (e.g., juvenile dermatomyositis), hematological disorders, cirrhosis, hypoproteinemia (e.g., malnutrition or protein-losing enteropathies), hypothyroidism, cellulitis or sepsis, deep vein thrombosis, medications (e.g., antihypertensive agents, calcium channel blockers or nonsteroidal anti-inflammatory drugs), severe allergic reactions, lymphedema, pregnancy, amyloidosis and some malignancies[(2)(3)(4)]. Uterine scar dehiscence, a complication occurring after cesarean section or other uterine surgeries, involves the partial or complete separation of a previously healed uterine incision. Uterine rupture is an uncommon but potentially fatal complication of pregnancy and labour. The clinical spectrum ranges from uterine scar dehiscence to complete rupture of the uterine wall and peritoneum. Traditionally, signs of uterine scar dehiscence may include abdominal pain, abnormal uterine bleeding. However, its presentation as generalized edema or anasarca is an exceedingly rare and atypical manifestation. The aim of this report is to illustrate this rare presentation and underscore the necessity for vigilance in considering uterine scar dehiscence in patients with a history of uterine surgery who present with unexplained generalized edema.

CASE REPORT

A 21 year old female was admitted in the female medicine ward, RNT Medical College, Udaipur, Rajasthan with complaints of abdominal distension, bilateral lower limb swelling and shortness of breath since last 5 days. Patient, P2L2 had undergone delivery of her 2nd child by LSCS along with tubectomy, 20 days before getting admitted in our ward. She reported no history of diabetes, hypertension or any other co-morbidity. No H/O similar complaints in past pregnancy.

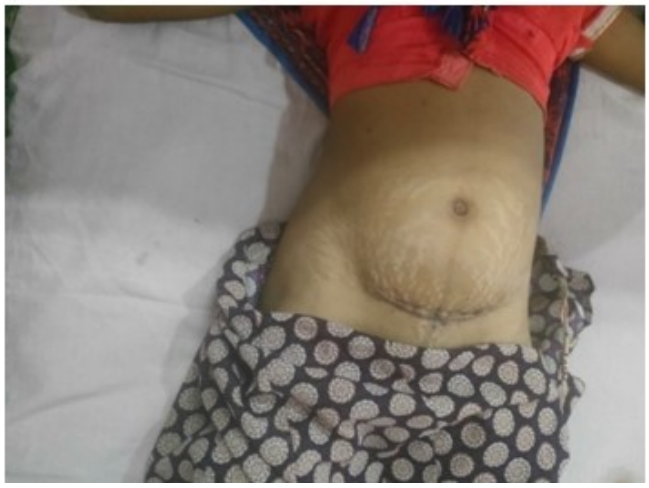

Figure 1.

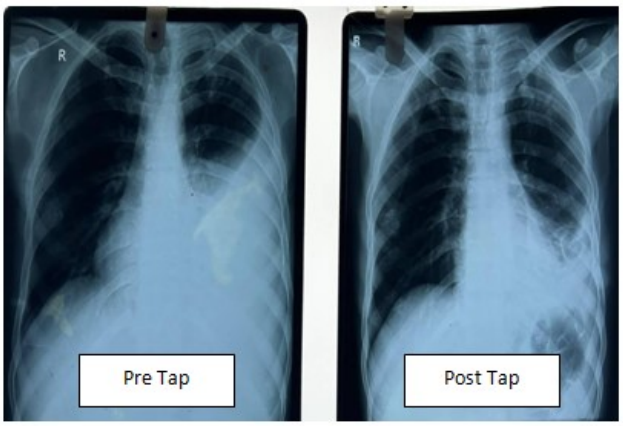

Figure 2

Patient was conscious, well oriented to time, place and person on admission. Vitals revealed pulse 100/ min, BP 110/70 mmHg, RR 18/min, SPO2 95% @ Room Air, GCS E4V5M6. General physical examination revealed bilateral pedal edema, pitting type, extending up to ankle along with pallor. No icterus, cyanosis, clubbing or lymphadenopathy (cervical, axillary, inguinal) were noted. Respiratory system examination showed decreased air intensity in B/L infrascapular and infraaxillary regions. On Abdominal examination, distension was noted with umbilicus pushed down, inverted. LSCS scar was also seen (Fig 1). Shifting dullness was also appreciated during examination. On auscultation, heart sounds were muffled, with no murmur/thrill. CNS examination was normal. X-ray chest was done and revealed blunting of left side costophrenic angle (Fig 2). ECG revealed Low voltage pattern. She proceeded with the following blood investigations as given (Table 1).

Table 1

HEMOGLOBIN (Hb)	7.90 g/dL	Total bilirubin	0.574 mg/dL
HCT	23.3%	Direct bilirubin	0.214 mg/dL
MCV	76.2fL	SGOT	68 U/L
MCH	25.9pg	SGPT	30 U/L
TLC	5.2	Total protein	4.1 g/dL
PT/INR	24.6 s / 1.9	Albumin	3.1 g/dL
Neutrophil	77.3%	ALP	317 U/L
Lymphocyte	12.5%	Calcium	7.0 mg/dL
Platelet count	33.0	Sodium	132.6 mmol/L
Urea	29.4 mg/dL	Potassium	3.7 mmol/L
Creatinine	0.6 g/dL	LDH	672 U/L

Urine examination revealed leucocytes and erythrocytes, 3+ and 4+ respectively, while there was no protienuria, ketonuria or glycosuria. Urine ACR – 359.69 mg/gm. Ascitic Tap was done and pale yellow, hazy fluid was aspirated which revealed 2400 total nucleated cells/ mm^3. Out of which there were 70% lymphocytes and 30% polymorphs. Ascitic fluid on examination revealed Glucose – 33.70 mg/dL and albumin – 2.30 g/dL. On calculating SAAG, it came out to be 0.8 g/dL. Subsequently Pleural tap was also done to patient, 100 ml of pale yellow yet clear fluid was aspirated which revealed 30 total nucleated cells/ mm^3. Out of which there were 90% lymphocytes and 10% polymorphs against a background of debris. Pleural fluid on examination revealed Glucose – 51.6 0 mg/dL and protein – 2.74 g/dL. On calculating light's criteria, it proved out to be exudative effusion. Initial investigations were within normal limits and not pointing to any particular diagnosis and taking into account, the symptoms of patients and post delivery status, Post-partum Cardiomyopathy was thought to be the initial diagnosis, 2D Echo was planned. Echocardiography result was as follows: LVEF- 55%, all 4 cardiac chambers were normal, no RWMA, normal LV systolic function, mild MR and TR. It also showed minimal pericardial effusion and large left sided pleural effusion. Therefore, 2D echo ruled out Post Partum Cardiomyopathy.

Other causes were looked for and USG abdomen was done which showed gross amount of free fluid with septations in abdominal cavity along with moderate amount of free fluid over both domes of diaphragm with underlying collapse/consolidation of lung parenchyma, along with mild bulky uterus (96x64x42 mm). Patient was found negative for Hep B, C and HIV. ESR – 15, CRP – 44 mg/L. Ascitic fluid's ADA and CBNAAT were evaluated. ADA- 74.60U/L but CBNAAT came out to be negative. Meanwhile, autoimmune workup was done and ANA and ANTI ds DNA were evaluated and found to be negative.

Upper GI Endoscopy was done and revealed hiatus hernia. CECT Thorax was done and showed significant amount of free fluid in both pleural spaces (left> right) with underlying collapse/consolidation of lung parenchyma. Also, CT scan revealed peripherally enhancing pocket of free fluid collection in abdominal cavity communicating with endometrial cavity due to scar dehiscence with signs of peritonitis. (Fig. 3, 4, 5)
Patient was initially managed with IV antibiotics and furosemide to which the patient was responding well as there was reduction in weight and abdominal girth of patient. Patient was finally discharged to Obstetrics and Gynecology dept for further management of uterine scar dehiscence where she was operated. Later, follow up for patient was done and no pedal edema, ascites, pleural effusion were recorded.

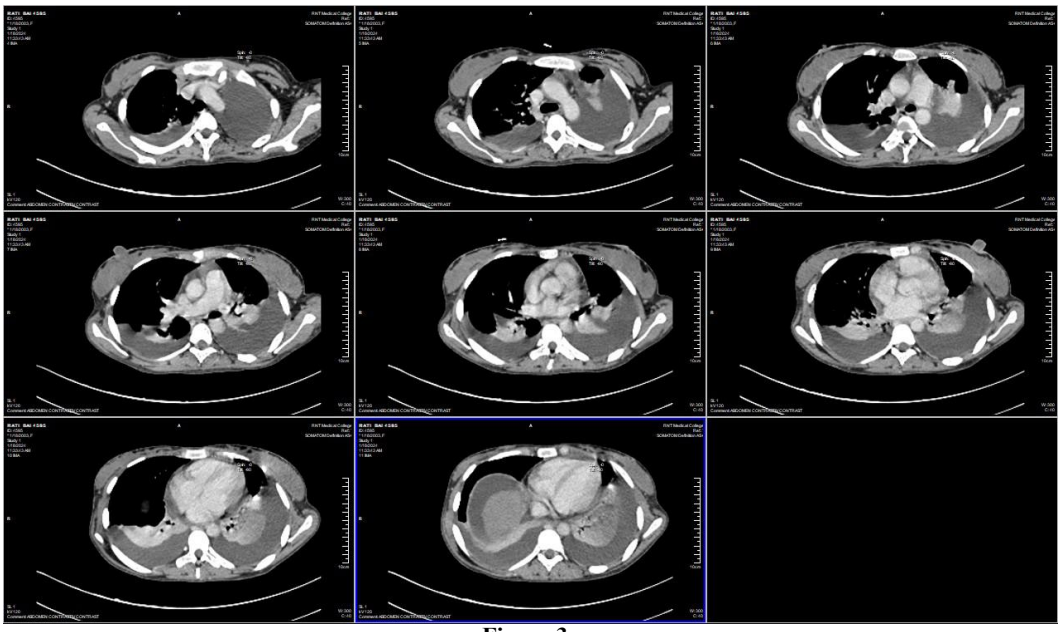

Figure 3

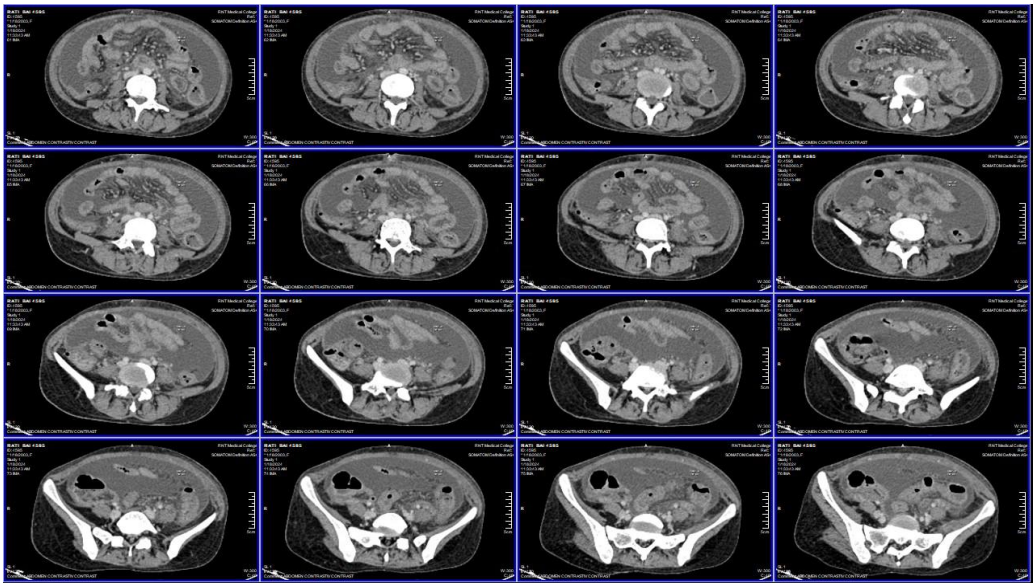

Figure 4

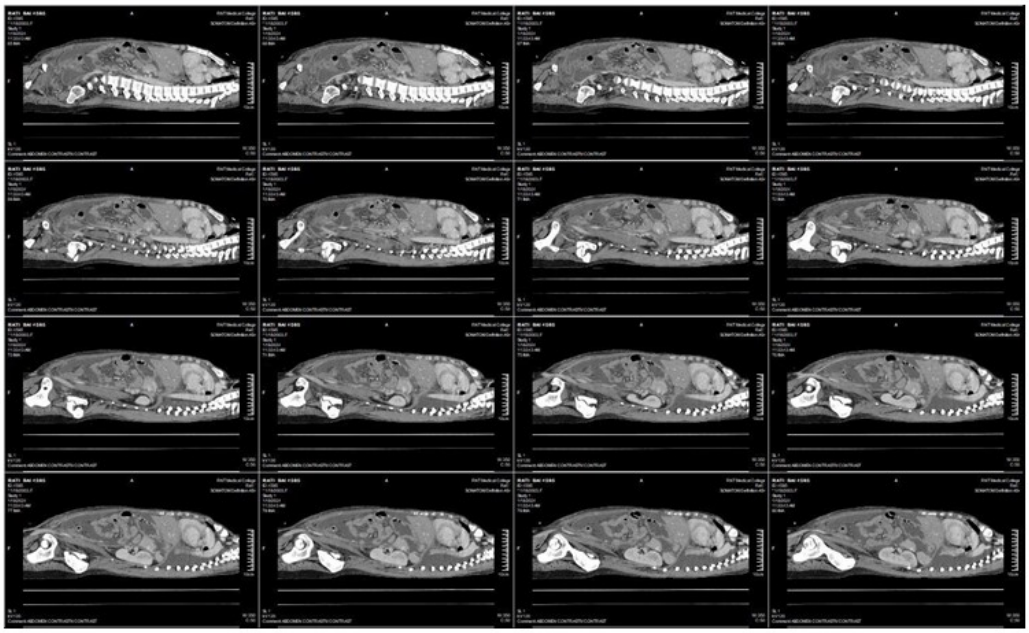

Figure 5

DISCUSSION

The incidence of cesarean section (C-section) deliveries has steadily increased worldwide. One notable complication of C-section is uterine scar dehiscence (USD), in which scar tissue remaining from a previous C-section is disrupted and separates. Uterine scar dehiscence can complicate caesarean section with complications like post partum hemorrhage, endomyometritis, localized/generalized peritonitis, and sepsis [5] [6] [7]. Although Uterine scar dehiscence has not been precisely defined, the reported incidence of this condition ranges between 0.2% and 4.3% of all pregnancies associated with previous c-section[8]. Some patients may be diagnosed immediately after childbirth and some may have presentation after about 2–4 weeks of delivery. Identification of the condition requires a high index of clinical suspicion and dependence on radiological signs seen on ultrasonography (transvaginal/3D) or the CT scan [9]. Infection associated with uterine dehiscence can present with fever, tachycardia, features of anemia, features of sepsis, and clinical signs like suprapubic tenderness and per vaginal tenderness. Intra-abdominal sepsis can present with free fluid within the abdomen, bowel distension, pleural effusion, and bladder flap hematoma [10] [11].

Anasarca is not a standalone disease but rather a symptom of an underlying medical condition, primarily diagnosed through clinical evaluation. While diagnostic tests can aid in assessing the extent and areas of swelling, their primary purpose is to identify the root cause. Treatment typically involves the use of diuretics and addressing the underlying cause. Therefore, it is crucial to diagnose and treat the underlying condition promptly.

Kaundinya Kiran Bharatam et al reported abdominal wound infection and localized peritonitis as presentation of a uterine scar dehiscence [12]. Amanda M. Tower et al reported abnormal uterine bleeding as complication of uterine scar dehiscence [13]. Gunjan Bahuguna et al reported 2 cases one of which presented as puerperal sepsis while the other case presented as puerperal sepsis, secondary post-partum hemorrhage and acute kidney injury as a complication of dehiscent scar postpartum after caesarean section [14]. But to the best of our knowledge, no case reports have been found on uterine scar dehiscence presenting as anasarca.

CONCLUSION

Anasarca, in this case, was likely a result of both systemic fluid imbalance and localized inflammatory response due to uterine scar dehiscence. Scar dehiscence leading to intra-abdominal infection or inflammation could exacerbate fluid shifts and contribute to widespread edema. This case highlights the importance of considering unusual complications in post-partum patients, especially those who present with symptoms of edema and fluid accumulation. It underscores the need for a thorough diagnostic approach when common causes of anasarca are ruled out. The limitations include the retrospective nature of the case and reliance on imaging and fluid analysis which, while diagnostic, do not always capture the full scope of the underlying pathology. Future research could focus on identifying early predictive markers for uterine scar dehiscence and related complications post-LSCS. Additionally, exploring the pathophysiological mechanisms that link uterine scar dehiscence to systemic fluid imbalances could enhance our understanding and improve management strategies.

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