CASE REPORT

Renal Tubular Acidosis: An Uncommon Cause of Bad Obstetric History

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Received: 16 February 2011 / Accepted: 1 July 2011 / Published online: 30 August 2013
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Introduction

Recurrent pregnancy loss is a challenging scenario for both the patient and clinician. The reported prevalence varies between 0.4 and 1 % [1]. Nephrologists are increasingly called upon to play an active role in establishing the cause of the same as a part of evaluation of altered renal parameters in patients with bad obstetric history. Renal tubular acidosis (RTA) is one such clinical entity arising out of altered tubular function commonly as a manifestation of various systemic diseases. In pregnancy, it has also been reported occasionally as a transient phenomenon without any apparent etiology [2]. This entity, although very rare in pregnancy [3], has been shown to be associated

with adverse maternal and fetal outcomes [2]. Early recognition and action to redress the same can help in achieving optimum outcome. We hereby describe a case of a 30-year-old female having history of multiple pregnancy losses. Investigations revealed distal RTA possibly secondary to Sjogren's syndrome.

Case

A 30-year-old housewife was referred to us in view of elevated serum creatinine of 1.4 mg/dl during her last pregnancy. She had a past history of three consecutive miscarriages. She was hemodynamically stable and her physical examination was unremarkable. Investigations revealed urea 18 mg/dl, serum creatinine 1.2 mg/dl, sodium 135 meq/l, potassium 4.2 meq/l. Urine analysis revealed a pH of 7, albumin-nil, RBC 1–2, WBC 2–4/HPF, and there were no casts. Urinary anion gap was 10. Blood gases revealed a pH of 7.29, PaO₂ of 120 mmHg, PaCO₂ 29.4 mmHg, and bicarbonate 13.9 meq/l suggesting non-anion metabolic acidosis. Her Anti-SS A and Anti-SS B were strongly positive (3+). X-ray KUB revealed bilateral nephrocalcinosis (Fig. 1). Ultrasonography of abdomen showed normal-sized kidneys with bilateral calcifications of pyramids suggestive of medullary calcinosis. The labial biopsy showed chronic sialoadenitis consistent with Sjogren's syndrome (Fig. 2). Gynecological evaluation was unremarkable. The above investigations were suggestive of distal renal tubular acidosis (RTA) possibly due to

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Fig. 1 X-ray KUB showing bilateral nephrocalcinosis

n. 2 Labial biopsy showing sialoadenitis with early lymphoid infiltration

Sjogren's syndrome. She was treated on standard lines of management with steroids and alkali replacement. On follow up, the metabolic acidosis showed significant improvement with stable serum creatinine.

Discussion

Recurrent fetal wastage affects around 1 % of pregnancies [1]. On evaluation, an underlying contributing factor can be

identified in about 40–50 % cases only [1]. RTA is a type of metabolic acidosis attributed to impaired distal tubular net acid excretion or proximal tubular bicarbonate wasting. This condition is usually characterized by minimal or no azotemia, hyperchloremic acidosis, inappropriately high urine pH, bicarbonaturia, reduced urinary excretion of titratable acid, and ammonia. There may be hypercalciuria along with the formation of kidney stones and secondary hyperparathyroidism. RTA has been shown to have detrimental effect on both the maternal and fetal wellbeing. A majority of the patients present with preterm labor [2]. It has been demonstrated that the blood flow to the pregnant uterus is decreased, and this may be potentially associated with fetal distress [4]. Intrauterine growth retardation and neonatal hyperparathyroidism are other potential complications. Our patient presented with recurrent pregnancy loss, her past medical records had documented serum creatinine of 1.4 mg/dl which during pregnancy was suggestive of significant renal impairment. Subsequent evaluation of the same revealed distal RTA secondary to possibly Sjogren's syndrome which may be responsible for recurrent pregnancy losses.

Conclusion

It is emphasized that one needs to have a high index of suspicion toward the nontraditional causes of recurrent pregnancy losses such as RTA. A multidisciplinary approach along with meticulous review of past records and symptomatology may provide clues in establishing the diagnosis. Early action to redress of the same could help in preventing maternal and fetal morbidity.

Acknowledgments Financial support: None.

Conflict of interest None.

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