EXTRAGENITAL DISEASES IN PREGNANCY: A CASE STUDY ON ACUTE KIDNEY INJURY

Eke Miracle Chiamaka
V. N. Karazin Kharkiv National University
School of Medicine

Kozub Tetiana Alexandrivna
MD, PhD
Department of Obstetrics and Gynecology
V. N. Karazin Kharkiv National University
UKRAINE

Introduction: Acute Kidney Injury is a heterogeneous syndrome in pregnant women and has multiple etiologies. It occurs typically in otherwise healthy women who developed obstetrical complications or acquired pregnancy-related medical conditions such as Pulmonary Embolism and/or hemolysis, elevated liver enzymes and low platelet count (HELLP) syndrome. However, several etiologies not related to pregnancy (Acute Gastroenteritis, Malaria, Pyelonephritis, Lupus nephritis, and Acute Interstitial Nephritis) are reported to cause Acute Kidney Injury in pregnancy. [1] Acute kidney injury secondary to hypoperfusion is very common especially in the background of changes in renal and cardiovascular physiology typical in pregnancy.

Objective: To discuss the case of a pregnant woman who developed Acute Kidney Injury and how this gives us an insight into the deficiencies of health care provision in developing countries.

Clinical case: Patient is Mrs O., a 36 year old G2P1 at 23 weeks gestation who presented at around 1:45am on account of multiple episodes of loose stools. She was said to have had 5 episodes that night, and several the previous day. Stool was watery, non bloody and contained some mucus streaks. She claimed she had a slight fever and had vomited multiple times. She also reported that she was urinating less than normal but she denied any changes in urine colour or smell.

There was no past history of chronic diseases.

On examination, vital signs were within normal ranges so, a provisional diagnosis of Acute Gastroenteritis was made.

Investigations such as urinalysis, blood film for malaria parasite, stool analysis, Full Blood Count, obstetric ultrasound scan were ordered. She was admitted into the emergency room, was placed on Ringers lactate infusion and later maintained on normal Saline/Dextrose Saline infusion. She was given some IV antibiotics and Zinc tablets.

A urinary catheter was also passed to monitor her urine output.

The next day at dawn, when she was reviewed by more senior doctors, she claimed she was feeling better. She had had fewer episodes of stooling from the night, was feeling stronger and had only 1 episode of vomiting over the night. Results of most investigations came back essentially normal but the result of urinalysis had a few casts in it.

However, attention was later drawn to this woman, at the time of evening review, when she was observed by her relatives to be talking irrationally. Her relatives didn't report this until it became worrisome to them.
She was examined and the following observations were made: General: she was not febrile, not pale, she was slightly icteric, severely dehydrated, not cyanosed, no peripheral lymph node enlargement, and had no pedal edema. CNS: She seemed conscious, but disoriented and gave irrational responses to questions asked. Respiratory: She was tachypneic. Lungs were normal on palpation and percussion. Her breath sounds were vesicular. Cardiovascular: Her pulse was thin and thready. Her Blood Pressure was unrecordably low. Heart rate was 124 beats per minute. Abdomen: It was distended, and the skin was shiny. It moved with respiration. There were no areas of tenderness. Liver and spleen were difficult to palpate because of the distension. Bowel sounds were present and normoactive. Urogenital System: Urethral catheter in-situ, draining very dark and concentrated urine. She had drained 60 mls in 6 hours (<30mls/hr). Vaginal Examination wasn't done.

Problems identified were: Dehydration, Oliguria, Icterus, Abdominal distension. A provisional clinical diagnosis of Acute kidney Injury, pre-renal form secondary to hypovolemia was made.

She was quickly rehydrated with 1 litre of normal Saline, then placed on maintenance at 1L every 8 hours. The consultant instructed that she be referred to a hospital where medical cases were managed as this was more likely a medical condition, than an obstetric one.

However due to financial and logistics constraints, the family was not able to move her to the hospital she was referred to. One hour later, the attention of the Doctor on duty was called to the patient that she was unresponsive and gasping for air. She was placed on Intranasal oxygen at 5litres/minute but her oxygen saturation kept dropping. She had no peripheral pulses and the heart sounds were very low and muffled. Cardiac massage and Cardiopulmonary Resuscitation were started immediately. Twenty minutes later, she no longer had any chest movements, no cardiac activity, her pupils were dilated and unresponsive to light.

She was declared clinically dead.

Conclusion: Comparative studies have shown that the incidence of kidney and urinary tract diseases is the highest among all extragenital diseases accompanying pregnancy. However, there are still huge differences in the epidemiological characteristic with respect to incidence, causes, and outcomes between developing and developed countries. These differences are due to environmental, socioeconomic, and different health delivery and organisation systems [2]. Acute Kidney Injury of course contributes to maternal mortality especially if not properly managed. For developing countries especially this problem in management can further be compounded by low socioeconomic conditions, no access to proper health care, lack of ambulance services, poor health seeking behaviour, sheer exhaustion of healthcare workers due to high patient to doctor ratio, amongst other reasons.

References: