

Post Operative Complication: Adrenal Crisis

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Abstract

Adrenal Crisis after surgical procedure is a rare but potentially catastrophic life-threatening event. Its manifestations, such as hypotension, hypoglycaemia, tachycardia, hypoxia, and fever mimic the other more common post-operative complications. Clinical outcome is dependent on the early recognition of symptoms.

Keywords: Adrenal crisis; Post-operative complication.

INTRODUCTION

Addisonian crisis, also known as adrenal crisis or acute adrenal insufficiency, is an endocrinologic emergency with a high mortality rate secondary to physiologic derangements from an acute deficiency of the adrenal hormone cortisol,

requiring immediate recognition and treatment to avoid death.

CASE REPORT

A 25 year old female patient came to OPD G3P2L2 with 7.5 wog was willing for MTP with TL.^{1,2} Patient was apparently alright, her first day of last menstrual cycle was on 2/3/23, her menstrual cycle is of 28-30 days with 3-4 days flow. She has 2 live child one of 7 year age was delivered by LSCS in view of meconium stained liquor with fetal distress and other of 5 year age delivered by LSCS in view of previous LSCS with scar tenderness. There was no any significant h/o major illness and no surgical history. On examination patient was afebrile, pulse rate was 88 bpm/regular, BP - 120/80mmhg, SpO₂ 98%, random blood sugar level was 80 mg/dl, respiratory rate: 18/min, there is no sign of clubbing, cyanosis, edema, icterus, lymphadenopathy. Systemic examination

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done and was within normal limit, per speculum examination done - cervix and vagina was healthy and normal, per vaginal examination done - uterine height 6-8 week size, bilateral fornices clear and non tender. Patient was admitted under OBGY department of ACPM medical College and hospital, Dhule. After taking physician fitness and pre anaesthetic check up patient was taken for MTP with laparoscopic TLelectively.

Procedure was explained to patient and relative and valid written consent taken from them.

Procedure done under spinal anaesthesia, procedure was uneventful and shifted to ward under stable vitals. Suddenly after 2 hrs of post operative she developed 2 episodes of convulsions, at that time patients vitals were -afebrile, Pulse rate - 100bpm/regular, BP - 70/40 mmHg, random blood sugar level - 46 mg/dl, patient was in post ictal phase. Hence patient had hypoglycaemia and hypotension. Immediately Inj. Levipil 500mg stat dose given and IV fluid D25 was given as symptomatic management, and her investigation including CBC,BSL, urine routine and microscopy, liver function test, renal function test, serum electrolyte levels of sodium, potassium, chloride were sent. To rule out underlying neurological abnormality CT brain was suggested and to rule out any post operative complication USG abdomen and pelvis done. Her vitals including temperature, pulse rate, blood pressure, sugar level, respiratory rate, abdominal girth, output, input were monitored half hourly. After this patient developed hyperglycaemia after 2 hrs of convulsion episode with random blood sugar level 320mg/dl then after 4 hrs of convulsion episode she started developing pedal oedema which was sudden in onset and gradual in progression in first 2 hour it developed on both legs upto knee, then after 4 hrs there was facial edema and within 12 hours there was generalized oedema. Her haemoglobin level was 8.7 gm/dl, WBC count was raised and platelet count was within normal limit, serum sodium level was 127.4 mEq/L, serum potassium levels was 6mEq/L, serum chloride level was 108.8 mEq/L, CT brain was within normal limit and USG Abdomen and pelvis was within normal limit. This ruled out any neurological abnormality and post operative complication. But after that patient had repeated episode of hypoglycaemia and hyperglycaemia which was resistant to any treatment. The development of oedema and deranged blood sugar level with decreased sodium and increased potassium levels were suggestive of adrenal crisis. So her serum cortisol level and ACTH level were

sent. She had decreased serum cortisol level to 80 nmol/L and increased ACTH level to 70 pg/ml both these reports suggested adrenal crisis, so on the basis of these investigations it was provisionally diagnosed as adrenal crisis.^{3,4}

Immediately treatment was started in that direction, administration of intravenous hydrocortisone done to replace deficient cortisol level, intravenous fluids were given to correct electrolyte imbalance, particularly elevated potassium level.⁵ To confirm this diagnosis CT abdomen and pelvis scan was done which suggested haemorrhage in both adrenal gland which caused decreased level of cortisol in body. Proper monitoring for serum electrolyte level done. Injection methylprednisolone 1gm once a day for 5 days given. Patient got better after proper treatment.

METHODOLOGY

Blood investigation: CBC, BSL, Urine routine and microscopy, LFT, RFT, Serum electrolyte, serum cortisol, serum ACTH

CT Abdomen and pelvis

CT brain

CONCLUSION

Adrenal crisis is a potentially lethal entity that is rarely reported after surgical procedures. The clinical manifestations are difficult to distinguish from common symptoms such as fever, hypoglycaemia, hypotension, tachycardia, and electric disturbances that are frequently observed in the postoperative patients. The clinical diagnosis is often empirical, thus requires a high index of suspicion. Administration of corticosteroid replacement can be lifesaving. We report here a patient with adrenal crisis who presented with hypoglycaemic seizure after operative procedure done for MTP with TL.

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