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Obstetrics & Gynaecology

FLUID OVERLOAD IN HYSTEROSCOPIC RESECTION OF SUBMUCOSAL MYOMA COMPLICATED BY OVER-USE OF FUROSEMIDE LEADING TO NEGATIVE FLUID BALANCE : CASE REPORT

KEY WORDS: hysteroscopy, myoma, submucosal myoma, furosemide

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ABSTRACT

Fluid overload in a case of hysteroscopic resection of submucosal myoma complicated by over-use of furosemide leading to negative fluid balance.

INTRODUCTION

Operative hysteroscopy has emerged as an effective alternative to hysterectomy and has become standard surgical treatment for varied gynaecological conditions like abnormal uterine bleeding and uterine myomas. Diagnostic and operative hysteroscopic procedures are minimally invasive and reduce complication rates when compared to its operative counterparts.

Though incidence of all complications is less than 5%, Fluid overload still is one potential complication, seen in 0.2%–6.0% of all cases.

Fluid media are used for operative procedures, as they allow continuous irrigation giving a clear picture and enable use of both mechanical and electrosurgical instruments. During operative hysteroscopy absorption of large volumes of distension solutions can occur leading to serious complications arising from significant fluid overload. Excessive fluid absorption is most likely with prolonged hysteroscopic procedures requiring continuous irrigation of fluid or where blood vessels within the myometrium are opened.

CASE REPORT:

A 47 year old P2L2 presented with complaints of menorrhagia since 2 months. USG was suggestive of thickened endometrium with ET 14mm and a submucosal fibroid measuring 2.5 cm x 3 cm. Patient was posted for diagnostic hysteroscopy and hysteroscopic resection of submucosal myoma under general anaesthesia. Patient had no comorbidities with normal pre-op investigations cardiovascular and renal profile. The procedure progressed with the patient in the Trendelenberg position at the surgeon's request.

Hysteroscopic examination revealed a large submucous fibroid measuring 3x3 cm arising from the antero-lateral uterine wall. Resection of the fibroid was started after distending the uterine cavity with normal saline, approx 7 litres of NACL was irrigated throughout the procedure and maximum 100 mmHg intrauterine pressure. In about 30-45 minutes of the operative procedure, the SpO2 suddenly fell from 98% to 90%-92%. Crackles were heard throughout both lung fields, NIBP 100/70 mmHg and pulse rate 100/min. The procedure was stopped after haemostasis. Both flanks had dull tone on percussion. Inj lasix 80 mg IV was given IV. Pouch of Douglas was accessed (Culdocentesis) and around 500-700 ml of fluid was drained.

The bladder was catheterized, with a urine output of 400 mL. Patient was put on a fluid restriction.

By evening within 4 hours, post-operatively patient complaint of paresthesia, dry mouth & increased thirst. Tachycardia, hypotensive & decrease in skin turgor was noted. Urine output was 2700ml.

Her serum electrolytes were deranged suggestive of hypernatremia & hypokalemia. Serum calcium suggestive of hypocalcemia. A 12 lead ECG was normal. Diagnosis of dehydration and hypokalemia secondary to Furosemide was made. IV Calcium gluconate was administered. Nephrologist opinion was taken, 100ml NS per hour for next 12 hours. IV KCL in 500 ml NS was given over a period of 4 hours.

By day 2, all the symptoms settled, serum electrolytes and serum calcium levels were within normal limits and patient was discharged after a full diet was tolerated.

DISCUSSION & CONCLUSIONS

Preventive measures include limiting excessive fluid for irrigation, identifying and treating fluid overload early. Early termination of the procedure; assessment of hemodynamic, neurological, respiratory and cardiovascular status; Measurement of serum electrolytes and osmolality; and consideration of the administration of diuretics only after significant fluid overload.

At the same time caution is necessary with the use of furosemide. Furosemide holds a black box warning suggesting the judicious and cautious use of the drug as it is a potent diuretic, it can cause excessive loss of water and electrolytes, leading to severe dehydration with electrolyte depletion.

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