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# ROLE OF ANAESTHESIA MANAGEMENT OF OBSTRUCTED UMBILICAL HERNIA IN KNOWN CASE OF CKD WITH HYPERTENSION

Anaesthesiology

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## ABSTRACT

Thoracic segmental epidural anaesthesia (TEA) is benefited in high risk cases where General Anaesthesia (GA) is avoided for better outcome. TEA reduces cardiac and splanchnic sympathetic activity. Systemic hemodynamic effects of TEA are adequately controlled. Apart from this, it provides post-operative analgesia, minimal post-operative complication. Chronic kidney disease (CKD) is a progressive & irreversible decline in renal function with reduced glomerular filtration rate. We hereby present a case report of 45 year Old male, Obstructed Umbilical hernia with CKD with HTN operated under TEA. The case was managed meticulously without any hemodynamic changes intra-operatively and minimal blood loss surgical field was achieved. Central venous pressure guided fluids were given to avoid electrolyte imbalance, fluid overload & hypotension

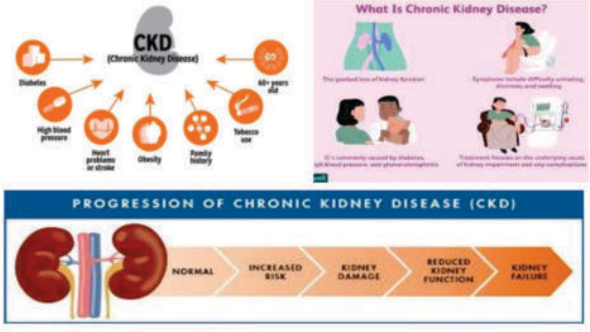
## KEYWORDS

## INTRODUCTION

CKD is a progressive & irreversible decline in renal function for more than 3 months.

Characterised by decrease in **GFR < 60ml/min/1.73m2**.
Causes: hypertension, diabetes, glomerulonephritis, SLE.

**Clinical features:**
CNS – neuropathies, encephalopathy.
CVS – arrhythmias, conduction blocks, CCF.
RS – pleural effusion
Metabolic – electrolyte imbalance & acid base d/o.
Hematological – anemia, leukocyte dysfunction.
skin – hyperpigmentation, pruritis.




**Case Details:**
**PRE-OPERATIVE**

- 45 years male, presented to the emergency O.T with complaints of swelling over umbilicus, pain in abdomen & vomiting.
- Diagnosed as a case of obstructed umbilical hernia in k/c/o CKD with hypertension.
- On treatment with Tab.Nifidepine 20 mg O.D since 10 years, Tab. Lasix 40 mg B.D, Tab. Sobisis 500 mg B.D,
- Tab. Prazopress XL 2.5 mg O.D.
- Undergoing dialysis thrice a week, last cycle was done one day prior to surgery.
- He was operated to create AV fistula over left upper limb 4 years ago.
- O/E**:** conscious, oriented, Pulse rate – 84/minute, BP – 208/126 mmHg, pallor & pedal oedema was present.

**Airway Examination –**

- Mouth opening – 4 fingers
- No loose/ missing teeth.
- Mallampatti grading – II
- Neck movements – adequate.

**Respiratory System –**
rate – 24 breaths/minute, air entry bilaterally equal & clear.
on air oxygen saturation was around 98%.

- **Cardiovascular System -** S1S2 present, no murmur.
- **Gastro-intestinal System –**per abdomen – distended & tender. 4x4 cm oval reducible swelling over umbilicus. blackening of skin & tenderness over swelling. fluid thrill test positive.
- Anuria since 1 day.

**Investigations:**
Hb - 9.7gm%, WBC – 5600/cmm, platelets – 1.5 lacs KFT – sr. urea – 230mg/dl sr. creat – 8.1mg/dl

LFT & sr. electrolytes were normal. ABG & Coagulation profile normal. ECG shows no changes.

USG – bilaterally shrunken kidneys. gross ascites noted. e/o obstructed umbilical hernia with edematous omentum seen.

**Intra-Operative**
MONITORING – pulse oximeter, NIBP cuff, ECG monitoring. care should be taken while positioning to adequately pad the pressure points.

**Procedure –** Excision of contents & Repair of umbilical hernia.

**Induction Of Anaesthesia –**
Thoracic Segmental Epidural Anaesthesia Under all aseptic precautions, Tuohy's needle inserted(T10-T11)

⬇

LOR are felt at 4 cm

⬇

Epidural catheter placed at 8 cm

⬇

Epidural catheter placed insitu

Test dose of inj. L+A (3ml) given
Inj. Bupivacaine 0.5% (5ml) given
Inj.Lignocaine 2% (5ml) given

Top up doses-Inj. Bupivacaine0.5%(5ml)
Inj. Lignocaine2%(5ml) given

Total 20ml volume
Adequate level of analgesia achieved upto T6.

- Minimal IV fluids were given to avoid fluid overload.
- Under all aseptic precautions Central line insertion done CVP Guided fluids given.

**Post-operative:**

- Pateint stable post operatively in recovery room.
- Post operative analgesia achieved adequately using top up doses.

- Patient was shifted to ward.
- Advice – SpO2, ABG, ECG monitoring. strict BP charting frequent CBC, LFTs & RFTs. input - output charting. Physician opinion in view of raised BP.CVP Monitoring.


**Anaesthetic Considerations:**
Drugs having renal route of excretion are used cautiously.Volume of distribution of drug depends on time since the last dialysis cycle.

**General Anaesthesia -**
- Desflurane & isoflurane are safe. Sevoflurane is nephrotoxic
- Succinylcholine can be used if preoperative potassium levels are normal.
- Atracurium & cisatracurium are drugs of choice.
- Neostigmine clearance decreases.
- Thiopentone is preferred over propofol.

**Regional Anaesthesa**
- Analgesics – non opioids like paracetamol & opioids like fentanyl etc are safe.
- Local anaesthetics like bupivacaine & lignocaine.
- They require lesser dose & have shorter duration of action.
- Advantages – effective anaesthesia.good postop. Analgesia minimal physiological disturbances. Improves vascular flow via regional sympathectomy.

## CONCLUSION
profuse hypotension was avoided & patient was hemodynamically stable.

Judicious fluid therapy was used to avoid electrolyte imbalance, fluid overload & hypotension.

Minimal intra-operative blood loss was achieved.

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