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Case Report

A case report: Anaesthetic management of a patient with sub acute intestinal obstruction with chilaiditi syndrome coming for surgery

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ABSTRACT

Chilaiditi syndrome is associated with hepatodiaphragmatic interposition of the colon and the small intestines. The radiological finding of colonic interposition between the liver and diaphragm is called chilaiditi sign. This is a rare anomaly incidentally seen on chest or abdominal radiographs. We present a case report of a 52 year old male who got admitted with complaints of abdominal distension and occasional pain after food intake for 5 months duration. The pain was dull aching and not radiating. He gave history of weight loss of about 10 kg over 5 months. His mother had similar complaints of dull aching abdominal pain of which she died. X ray chest showed gross dilatation of descending and transverse colon causing mediastinal shift to right. The CT chest showed emphysematous bullae on the left lobe. The working diagnosis of Chilaiditi syndrome was made. The patient came for surgery with subacute intestional obstruction. Here, in this case report we discuss the anaesthetic management.

1. Introduction

Chilaiditi syndrome is associated with hepatodiaphragmatic interposition of the colon and the small intestines. The radiological finding of colonic interposition between the liver and diaphragm is called chilaiditi sign. This is a rare anomaly incidentally seen on chest or abdominal radiographs. Here, in this case report we discuss the anaesthetic management a patient diagnosed with chiladati syndrome planned for laparotomy and proceed for persistent sub acute intestinal obstruction. [1]

2. Case Report

After obtaining, institutional scientific review board and ethical committee clearance, informed consent was obtained from the patient for presenting the case report. We present a case report of a 52 year old male who got admitted with complaints of abdominal distension and occasional pain after food intake for 5 months duration. The pain was dull aching and not radiating. He gave a history of chest discomfort and breathlessness on lying which gets relieved by sitting. He had weight loss of about 10 kg over 5 months. He has no co-morbidities. His mother had similar complaints of dull aching abdominal pain of which she died. He gave history of herniotomy at one year of age. [2]

During preoperative assessment detailed history, physical examination was carried out. His breath holding time was 12 seconds and functional activity was not assessed as patient was bedridden. Patient's vitals were within normal range. His airway assessment was adequate. The CVS examination was normal and on respiratory system examination revealed reduced air entry in bilateral infra scapular region. X ray chest showed gross dilatation of descending and transverse colon causing mediastinal shift to right. The CT chest showed emphysematous bullae on the

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left lobe. The, 12- lead ECG was normal. Cardiologist and pulmonologist opinion was obtained. His Echocardiogram was normal with EF: 60% and no RWMA. The PFT showed obstructive pattern.

Fig. 1: Preoperative CT scan abdomen plain showing dialated large intestines.

Fig. 2: Preoperative Xray showing dialated large intestines with mediastinal shift to right.

The routine bood and urine investigation was normal.(Hb- : 12gm%, Total leukocyte count:150000per mm,[3] Platelets: 3 lakhs per ml, Blood Urea: 22. gm %, Serum Creatinine: 0.5. Meq/L), The electrolytes and coagulation were normal.(Na: 135/ K: 3.5/ HCO3: 20. and. PT: 14. INR: 1.2. APTT: 31 sec). The working diagnosis of Chilaiditi syndrome and laporatomy and proceed for subacute intestinal obstruction was planned under ASA 4 and a high risk informed consent was obtained. Two units PRBC with ICU bed and ventilator were reserved.

With adequate premedication patient was shifted to operating room, 16 gauge cannula was secured in both the hands, standard monitors were connected to monitor NIBP, HR, ECG Lead II and V5, temperature, pulseoximetry and end tidal CO2. Under Aseptic precautions, L1-L2 space identified and 18 gauge Touy needle was inserted and epidural catheter was fixed at 12 cm at skin level. Test dose of 3ml of 2% lignocaine with 1 in 2,00,000 conc. adrenaline was given. Patient was premedicated with Injection Midazolam 1mg, Injection Glycopyrrolate 0.2mg, Injection Fentanyl 100mcg and preoxygenated for 3mins with 100% FiO2. He was induced with Injection propofol 100mg IV and ventilated with 100% FiO2. Intubation was facilitated with Injection Atracurium 40mg IV using 4size McIntosh blade with 8 size ETT and fixed at 18cm at the corner of mouth. A 5 point ausculatation done and position of the tube was confirmed with ETCo2. Patient was maintained with 1 vol% of sevoflurane and O2: Air at 50% each. He was put on pressure control mode with pressure limit of 30 cm of H20 and RR was at 12 per minute. A 18F Ryles tube was fixed in place and patient was cathertized.

At the start of laparotomy ABG was done which showed normal values. Once the Megacolon was excised - that is ascending colon, transverse colon, descending colon along with caecum, iliorectal anastomosis was planned during which BP dropped to 80/50 mmHg which was managed with one unit PRBC transfusion and adequate fluid resuscitation. EtCo2 dropped to 20mmhg for which tube position was checked and it showed reduced air entry.[4] ETT was pushed after deflating and fixed at 21cm after which bilateral air entry was confirmed with 5 point ausculatation and adequate EtCo2. Patient was put in volume control mode with 500ml tidal volume at 12 respiratory rate and PEEP of 6. Total of 4 L of Ringer lactate was given with intraoperative urine out put of 800ml. The epidural analgesia was managed with epidural infusion of 0.125% bupivacaine at 2ml/hr. At the end of the surgery, Arterial blood gas was done and it showed Metabolic acidosis (pH 7.29 / Hco3- 16 / pCo2 - 30 / Lactate - 2.5) for which 8.4% Sodabicarbonate 20mEq was given. Patient was shifted to ICU with ETT insitu and kept on observation for one day. He was put of pressure control mode with Fio2 of 80% Peep: 5 and Pressure: 30 cm of H2o. Patient was given dexmedetomine and fentanyl infusion and one PRBC was

transfused. Close monitoing of the vitals was done and patient was given trial extubation after the arterial blood gas returned normal. As the trial extubation yielded good results patient was attempted for extubation after fully awake state was achieved. Patient responded well to commands and adequate tidal volume was taken by the patient.

Fig. 3: Resected toxic megacolon

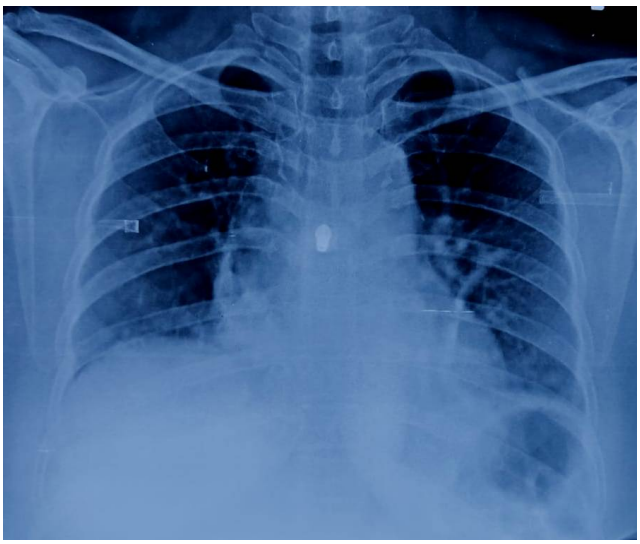

Fig. 4: Post-operative chest xray was taken which showed clear lung fileds with bilateralequal and adequate. air entry.

Orals were started on. POD 3 with liquid diet and epidural catheter was removed under Aseptic precautions with blue tip intact and bromage 0. On POD 5 soft diet was started and he got discharged on POD 10. Patient was able to mobilize well and continued normal routine.

3. Discussion

Demetrius Chilaiditi first described hepatodiaphragmatic interposition of hollow viscera in 1910 as an incidental finding on chest X-rays. Differential diagnosis includes pneumoperitoneum, subphrenic abscess or diaphragmatic hernia. Finding normal plicae circulars or haustral markings of the colon under the diaphragm can rule out these serious entities. The appropriate diagnosis of this condition is extremely important as other entities in the differential diagnosis may require exploratory laparotomy for management, whereas the treatment for this syndrome is generally conservative. Persistence of the symptoms or development of complications may warrant surgical treatment. Our case was first managed conservatively and in view of persistent subacute intestinal obstruction the patient was taken up for urgent exploratory laporatomy. Chilaiditi syndrome is rarely considered in the differential diagnosis of patients presenting with diffuse abdominal symptoms. Awareness of such entity is essential for surgeons, anaesthetists and intensivists. Complications of Chilaiditi syndrome may include volvulus of the caecum, splenic flexure, or transverse colon, caecal perforation, gangrene of bowel and rarely, perforated sub diaphragmatic appendicitis. These complication lands up the patient to OT in urgent manner and anaesthesiologist should be aware of such entity while managing the patient. This case was presented with subacute intestinal obstruction and the intraoperative finding was toxic megacolon comprising of ascending, descending, transverse colon and caecum for which ileorectal anastomosis was done. The anaesthetic management comprised of adequate volume status resuscitation before induction to prevent BP fall during induction. Use of Air instead of N20 in maintenance of anaesthesia, prevention of aspiration during intubation adequate fluid management, avoidance of hypothermia, Plan for adequate analgesia, multimodal should be in plan. Colloid infusion given whenever need arises. Elective ventilation post op and in case of sepsis and septic shop appropriate inotropic support. Post op ICU care is a must in most long standing cases.

4. Conclusion

As anaesthesiologist, we should be aware of Chilaiditi syndrome and that we may come across varied clinical scenarios some of them in urgent/emergent conditions. The understanding of the pathophysiology and introperative findings should help in appropriate perioperative management of the patient.

5. Source of Funding

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6. Conflict of Interest

None.

References

1. Bhandari RT, Shahi S, Khan SA. Chilaiditi Syndrome: An Unusual Case Report. *J Surg Res*. 2019;2(3):65–9.
2. Alshorbagy A. Open Transthoracic Plication of the Diaphragm for Unilateral Diaphragmatic Eventration in Infants and Children. *Korean J Thorac Cardiovasc Surg*. 2015;48(5):307–10.
3. Yin AX. Chilaiditi Syndrome Precipitated by Colonoscopy: A Case Report and Review of the Literature. *Hawai J Med Pub Health*. 2012;71(6):158–62.
4. Dsouza S. Chilaiditi syndrome-a clinical conundrum. *Southern Afr J Anaesth Analg*. 2018;24(6):170–1.

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