

# MANAGEMENT OF ILEOCECAL VALVE ADENOCARCINOMA PRESENTING AS INTESTINAL OBSTRUCTION: REPORT OF A CASE AND LITERATURE REVIEW

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## ABSTRACT

**Introduction:** Ileocecal valve (ICV) adenocarcinoma is a rare cause of colorectal cancer arising at the transitional zone. Diagnosis is challenging due to the asymptomatic nature.

**Materials and methods:** A 55-year-old female presented with lower abdominal pain and change in bowel habits. CT scan demonstrated a 3.8 cm mass at the ileocecal valve and hepatic lesions. The patient was admitted for further investigation. MRI and colonoscopy were carried out.

**Results:** Laparoscopy was performed to identify the location of the lesion and remove the cause of bowel obstruction. During laparoscopy, a solid mass was identified at the ICV, therefore a laparoscopic right hemicolectomy was performed. The post-operative recovery was uneventful.

**Conclusion:** The diagnosis and management of ICV tumor is challenging, commonly due to the delayed presentation and asymptomatic nature. Patients usually present with signs and symptoms of bowel obstruction and proper investigation is needed to identify the cause. Laparoscopic surgery can also be an option if the patient is hemodynamically stable and there are no signs of peritonitis rather than emergency laparotomy, as it is associated with fewer post-operative complications.

## CONTACT

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## INTRODUCTION

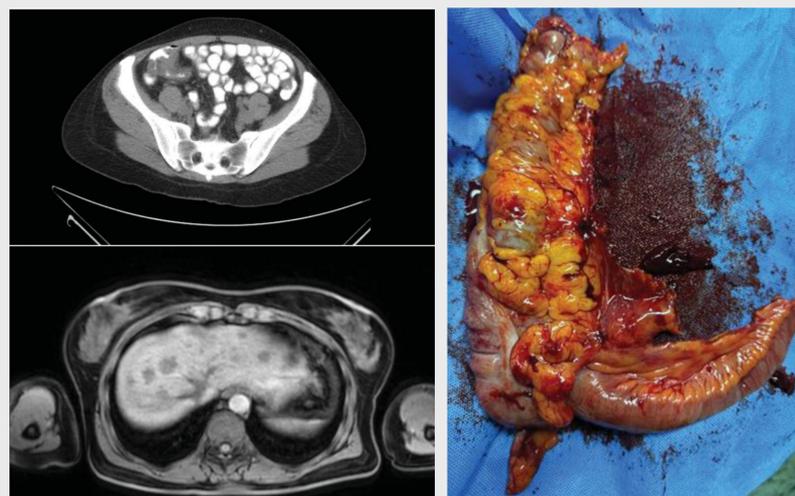
- Transition zones: anatomical sites where two different types of epithelia meet, resulting in unique functional properties and increased risk of cancer susceptibility [1].
- Examples: endo- ectocervix, cornea-conjunctiva, gastro-oesophageal and ileocecal junction (ICJ).
- ICJ: rare site for primary gastrointestinal malignancies [3]
- Mucosa in the terminal ileum: receives large amounts of bile acids, Mucosa in the ascending colon: exposed to a different bacteria [2].
- ICV tumors are often diagnosed only incidentally or when complications such as bowel obstruction or bleeding arise.
- Predisposing factors: female gender, inflammatory bowel disease, and familial adenomatous polyposis (FAP).
- Purpose: Describe a rare case of ICV adenocarcinoma who presented with signs of partial bowel obstruction and the management plan.

## METHODS AND MATERIALS

- A 55-year-old, female presented with progressive lower abdominal pain, bloating, and constipation for five days.
- Clinical examination: hemodynamically stable, distended abdomen, mild tenderness in the lower quadrants without signs of peritonitis.
- Past medical and surgical history was clear. No imaging studies in the past, neither colonoscopy nor gastroscopy were performed.
- Laboratory test values were within the normal range. Abdominal X-ray demonstrated dilated small bowel loops without air-fluid levels.
- Abdominal contrast-enhanced CT scan: 3.8 cm solid mass at the ICV and was extending 7-8 cm into the terminal ileum, causing partial bowel obstruction (Figure 1a).
- Transition point was present, and enlarged mesenteric lymph nodes (0.5 cm) were also noted near the ICV. Multiple small hepatic lesions were identified.
- Abdominal MRI scan confirmed that the small hepatic lesions were suggestive of secondary metastases.
- Colonoscopy was conducted six days after admission. Due to the lack of preparation, the colonoscope reached up to 70 cm from the anal verge with no pathological findings.

## RESULTS

- Patient was admitted for bowel rest and IV fluids. Over 48 hours, symptoms improved and a clear-fluid diet was initiated.
- A laparoscopy was performed 7 days after admission to identify the location of the lesion and remove the cause of obstruction.
- During laparoscopy, a solid and firm mass was confirmed at the ICV. Therefore, a laparoscopic right hemicolectomy was performed following oncological surgical protocol (figure 2).
- Post-operative recovery was uneventful, with the nasogastric tube and urine catheter removed intra- operatively, and no drainage tube was placed.
- Patient returned on a regular diet on the 3<sup>rd</sup> day and was discharged on the 4<sup>th</sup> postoperative day.
- Histological examination: ulcerative, mucus-producing adenocarcinoma of the ICV, measuring with full-thickness infiltration. Perilymphatic nodes (7/20), perineural (Pnl) and vascular invasion, and pericolic fat tumor deposits were also noted (T4aN2bM1 stage).



**Figure 1:** a) Contrast-enhanced CT abdomen/pelvis showing a solid mass at the ileocecal valve  
b) Abdominal MRI revealing multiple hepatic metastatic lesions.

**Figure 2.** Resected specimen of the laparoscopic right hemicolectomy

## DISCUSSION

- ICV cancer (ICV-CA) is a rare entity with a higher prevalence in older female patients.
- Clinical manifestations are non-specific and the majority remain asymptomatic until complications arise.
- Diagnosis is challenging, especially in the non-acute settings. Laboratory values may include leukocytosis, ↑CRP and electrolyte disturbances, accompanied by ↑ lactate.
- Imaging modalities contribute significantly to the diagnosis especially in acute cases. In specific scenarios, diagnosis is made intraoperatively.
- In subclinical presentations (i.e. iron deficiency anemia) colonoscopy is the diagnostic tool of choice. Colonoscopy also has its role in acute cases of partial bowel obstruction [4].
- Surgical resection → right hemicolectomy is the first-line treatment for ICV carcinoma.
- Primary lymphomas: cytotoxic chemotherapy remains the cornerstone of treatment. Surgery is typically reserved for diagnostic purposes or in cases of complications.
- Laparoscopic surgery: an option if hemodynamically stable and no signs of peritonitis.
- Prognosis: when defined broadly as tumors with their epicenter within 5cm of the ileocecal valve, prognosis is similar to right-sided colon cancers.
- Applying a narrower definition—limiting ICJ-CAs to those that directly involve ICV—reveals a prognostic difference with poorer outcome.

## CONCLUSIONS

- Diagnosis of ICV-CA is challenging due its asymptomatic nature and the late presentation.
- Patients who are hemodynamically stable without signs of peritonitis should be carefully investigated prior to surgery, and a colonoscopy can also be performed.
- It is of vital importance to support the patient's nutritional needs to reduce the risk of post-operative complications.
- Patients with partial ileus due to ICV-CA may undergo laparoscopy to confirm the presence of mass if colonoscopy is not diagnostic.
- In cases where the surgeon is experienced enough, a laparoscopic right hemicolectomy can be performed, as it is associated with fewer post-operative complications compared to the open surgical method.

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