Atypical case of recurrent abdominal pain — case report

Introduction

Though abdominal pain (AP) is a common complaint in emergency rooms (ER) or departments, it may lead to misdiagnosis.

Case report

- We present an unusual case of intestinal obstruction in adults
- A 52-year-old patient was referred from the ER with multiple complaints, AP being the cardinal one. Abdominal pain was present over the past month, for which was repeatedly examined (at least twice) in the ER

Case report

- At the last consultation, routine investigations were performed and was diagnosed as having a urinary tract infection being discharged and receiving treatment. Repeated ultrasound (US) examination revealed only gallstones
- Last physical examination that led to this admission revealed sensibility in the left side of the abdomen and a palpable elastic formation in the right iliac fossa, formation that disappeared the next day after admission

- In the day of the previewed discharge, the AP reappeared as well as the palpable elastic formation, in the right side paraumbilical
- US examination raised the suspicion of ileocolic intussusception due to a polypoid tumour
- Contrast-enhanced computed tomography confirmed the findings and precisied that the polypoid tumour is more likely a lipoma
- Surgery (right hemicolectomy) was performed and a fatty tumour (macroscopically) of the ileocecal valve was also found
Discussion

- If most of the intussusceptions are encountered in the pediatric population, adult intussusception is a rare condition that accounts 5% of all cases of intussusceptions.

- An underlying cause is found in 70-90% of cases in adults.

- Pre-operative diagnosis remains difficult and in approximately 50% of the cases diagnosis is established intra-operatively.

Conclusion

Intestinal intussusception in an adult caused by a benign tumour, typically asymptomatic if smaller than 2 centimeters, diagnosed first by US preoperative renders peculiarity to our case.

References

Is a complete remission of intestinal metaplasia a suitable endpoint in patients undergoing radiofrequency ablation (RFA)? Long-term results of rfa treatment in 67 consecutive patients

**BASELINE CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of patients</td>
<td>67 (55M, 12F)</td>
</tr>
<tr>
<td>Age (range)</td>
<td>62 (20–86)</td>
</tr>
<tr>
<td>BORN</td>
<td>65 patients (37.3%)</td>
</tr>
<tr>
<td>• Early adenocarcinoma</td>
<td>21 patients (12.5%)</td>
</tr>
<tr>
<td>• High-grade intraduodenal metaplasia</td>
<td>22 patients (12.5%)</td>
</tr>
<tr>
<td>Low-grade intraduodenal metaplasia</td>
<td>15 patients (25.9%)</td>
</tr>
<tr>
<td>ESC</td>
<td>2 patients (3%)</td>
</tr>
</tbody>
</table>

**TREATMENT MODALITIES**

<table>
<thead>
<tr>
<th>Modality</th>
<th>Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFA as a single treatment modality</td>
<td>20 patients (30%)</td>
</tr>
<tr>
<td>RFA combined with endoscopic resection or distention of a visible lesion</td>
<td>47 patients (70%)</td>
</tr>
</tbody>
</table>

| Treatment sessions | 38 | 85 | 1 |

**INTRODUCTION**

- Radiofrequency ablation (RFA) in combination with endoscopic resection (ER) is a method of choice for treatment of early esophageal neoplasia.
- Complete remission of intestinal metaplasia (CR-IM) and complete remission of dysplasia (CR-D) are commonly used as the endpoints of successful treatment.
- The relevance of CR-IM (in patients with macroscopically normal neo-Z-line) has recently been challenged.

**AIMS & METHODS**

- To assess the long-term efficacy of RFA
- 67 patients were included (mean age 62)

**Indications for treatment:**

a. Barrett’s Oesophagus Related Neoplasia (BORN)
b. Early squamous carcinoma (ESC)

**Treatment:**

- RFA with HALO system (HALO 380, HALO 90 and 60)
- ER – multiband ligation method

**Follow-up:** median 30 months (range 0.5–64)

**TREATMENT RESULTS I.**

(Analysis of 54 patients (82%) who have already finished the treatment)

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Observed</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR-IM</td>
<td>65% (95% CI 63–70%)</td>
<td></td>
</tr>
<tr>
<td>CR-D</td>
<td>94% (95% CI 93–99%)</td>
<td></td>
</tr>
<tr>
<td>Recurrences of intestinal metaplasia</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>Recurrences of neoplasia</td>
<td>3.7%</td>
<td></td>
</tr>
<tr>
<td>Detection of buried glands</td>
<td>0%</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 1:** Endoscopic resection and RFA HALO 90 during a single session.

**TREATMENT RESULTS II.**

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Observed</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients without CR-IM</td>
<td>35% (18 pts)</td>
<td></td>
</tr>
<tr>
<td>Macroscopically normal neo-Z-line</td>
<td>83% (15 pts)</td>
<td></td>
</tr>
<tr>
<td>Neo-Z-line with visible islands or tongues</td>
<td>17% (3 pts)</td>
<td></td>
</tr>
<tr>
<td>Recurrences of IM at the level of neo-Z-line</td>
<td>25% (10 pts)</td>
<td></td>
</tr>
<tr>
<td>Macroscopically normal neo-Z-line</td>
<td>90% (5 pts)</td>
<td></td>
</tr>
<tr>
<td>Neo-Z-line with visible islands or tongues</td>
<td>10% (1 pt)</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 2:** Normal neo-Z-line after CR and RFA with persistent 90.

**Figure 3:** Irregular neo-Z-line with recurrence of IM.
Cost-effectiveness of colonoscopy in the screening program (PCSP, Polish Colonoscopy Screening Platform); methodology deliberations

Cost-effectiveness analysis (CEA)
- CEA has been applied for colorectal cancer already.
- Lack of such studies concerning situation in Poland.

Cost-effectiveness analysis (CEA)
- CEA is a technique designed to measure costs and health benefits attributable to two or more medical interventions (or no intervention).
- Conducting cost-effectiveness analysis in medicine is becoming more and more important; however, methodology and access to reliable data for calculations is not readily available.
Cost-effectiveness analysis (CEA)

**Pros**
- Synthetic tool.
- Helpful in decision-making process.
- Compares different medical interventions in complex system.

**Cons**
- Availability and accuracy of data.
- Modeling vs. real world.
- Uncertainty due to unclear information.

Methodology

- Comparing colonoscopy with no screening.
- Conducting sensitivity analysis.
  - Crucial variables: personnel costs, administrative costs and health benefits’ data.
- Cost-effectiveness comparisons between different types of screening centres taking part in the program according to their founding.

Aim of the study

- To use data from screening colonoscopy program within the TEAM project - "Experimental population based platform to evaluate and monitor the effectiveness of screening colonoscopy: a population based comparative effectiveness study. (PCSP, Polish Colonoscopy Screening Platform)".

Expected results

- Data collected from approximately 80 screening centres will allow for reliable assessment and comparisons.
- It is expected that ICER calculated for the program will be lower than cost-effectiveness threshold in Poland.
- Significant differences in CEA between screening centres of different types are also expected.

Methodology

- Data for the cost-effectiveness analysis obtained from Polish Ministry of Health and from the program databases.
- Calculating cost-effectiveness ratio (ICER).
  - Costs: personnel costs, administrative costs, histopathology costs, medical materials’ costs, medical equipment costs, depreciation data, invitation to screening costs.
  - Effects: e.g. life-years gained.

INCIDENTAL HEPATOCELLULAR CARCINOMA:
Risk factors and long-term outcome after liver transplantation

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**Conflict of interests:** The authors have declared that no competing interests exist.

**Financial support:** The study was supported by the project: Ministry of Health, Czech Republic (for development of research infrastructure in liver transplantation).
INTRODUCTION

- Orthotopic liver transplantation (OLT) currently represents the treatment of choice in patients with early hepatocellular carcinoma (HCC).
- Despite the increasing quality of HCC screening methods, patients at risk, detection of HCC from dysplastic nodules in cirrhosis liver before OLT remains challenging.
- Therefore, hepatocellular carcinoma detected incidentally in the liver explant after OLT, detected as incidental HCC (I-HCC), is not insignificant.
- However, the data describing the characteristics of I-HCC patients and their clinical outcomes are limited.

AIMS & METHODS

Aims

- Comprehensive analysis of post-transplant survival of patients with incidental HCC in our center.
- Comparison of their survival rates with patients with preoperatively known HCC (pHCC).
- Identification of risk factors of incidental HCC occurrence in cirrhotic liver.

Patients and methods

- We retrospectively examined 123 adult cirrhotic patients with incidentally found HCC (I-HCC group) and compared them with 654 transplanted cirrhotic patients (pHCC group).
- All patients underwent OLT in our center between 2004 and 2013.
- Within the same period, a total of 46 patients were transplanted for pHCC.
- The group of cirrhotic patients (pHCC) we selected for risk factors of HCC occurrence.

RESULTS – PATIENT CHARACTERISTICS

<table>
<thead>
<tr>
<th>Variable</th>
<th>pHCC group</th>
<th>I-HCC group</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>53 ± 10</td>
<td>55 ± 15</td>
<td>0.05</td>
</tr>
<tr>
<td>Males (%)</td>
<td>614 (37%)</td>
<td>46 (37%)</td>
<td>0.85</td>
</tr>
<tr>
<td>Malignant tumors (%)</td>
<td>34 (31%)</td>
<td>2 (4%)</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>HCC stage (0–4)</td>
<td>16 (15%)</td>
<td>1 (2%)</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>HCC size (cm)</td>
<td>4.0 ± 2.4</td>
<td>1.0 ± 0.8</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>Number of positive nodules</td>
<td>15 (14%)</td>
<td>1 (2%)</td>
<td>&lt; 0.01</td>
</tr>
</tbody>
</table>

There was a significant difference in age (Dobie–Pugh score and alpha-fetoprotein level).

RESULTS – SURVIVAL

Overall survival

- 1-, 3-, and 5-year overall survival differed in HCC patients compared with the pHCC group (p < 0.05).
- There was not a significant difference in overall survival between pHCC and I-HCC patients (p > 0.05).

Recurrence of HCC

- Tumor recurrence was detected in 3 patients (5.2%) with pHCC and in 3 patients (6.4%) after OLT.

RESULTS – ETOLOGY & RISK FACTORS

- Incidental HCC was predominantly found in patients transplanted for alcoholic liver cirrhosis (35.9%) and/or cirrhosis owing to hepatitis C (31.4%), whereas none of HCC occurred in cholestatic liver cirrhosis

<table>
<thead>
<tr>
<th>Variable</th>
<th>pHCC group</th>
<th>I-HCC group</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol (%)</td>
<td>343 (52%)</td>
<td>2 (4%)</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>HBV (%)</td>
<td>185 (28%)</td>
<td>1 (2%)</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>HCV (%)</td>
<td>166 (24%)</td>
<td>1 (2%)</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>CHB (%)</td>
<td>343 (52%)</td>
<td>2 (4%)</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>CHC (%)</td>
<td>2 (3%)</td>
<td>1 (2%)</td>
<td>0.94</td>
</tr>
<tr>
<td>OLT for CHB (%)</td>
<td>343 (52%)</td>
<td>2 (4%)</td>
<td>&lt; 0.01</td>
</tr>
</tbody>
</table>

RESULTS – CONCLUSION

- We conclude that the survival of incidental HCC patients is worse than in tumor-free cirrhotic patients, but comparable with survival of preoperatively known HCC patients.
- Independent risk factors for incidental HCC occurrence in cirrhotic liver are age, HCV or alcohol liver disease etiology of cirrhotic liver and AFP level.
Losing a pound and finding a penny

**Title:**
Losing a pound and finding a penny

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**Histology**
- Rectal-sigmoid tumor – mucinous adenocarcinoma
  with signet ring cells

**GENERAL DATA**
- B.C., male, 74 years old
- Past history – right renal cyst, prostate adenoma
- 07.2003 - admission – recent alteration of bowel transit (constipation alternating diarrhea), rectal tenesmus, flatulence, loss of appetite, rectal bleeding onset 3 months ago
- Rectal examination - tumor at 8 cm from the anal verge, on the right lateral wall of the rectum
- Laboratory –
  - ESR – 38/90 mm/h 1st, 2nd
  - Haematocrit: normal;
  - Plasma iron 440 g/l
  - CEA – normal
- Abdominal ultrasound – liver steatosis, normal bile ducts, portal vein and gallbladder no adenopathy
- Chest X-ray – normal

**Colonoscopy**
- Colonoscopy – at 8 cm from anal verge – stenotic large ulcerated tumor with spurious bleeding, which cannot be passed with the scope

**Losing a pound and finding a penny**
- Patient refused any treatment
AFTER 7 MONTHS

Losing a pound and finding a penny

- 02.2014 – weight loss, rectal bleeding, asthenia

NEOADJUVANT CONCOMITENT CHEMORADIOThERAPY TREATMENT

- RXT - 55 Gy/25 fr/5 weeks on the rectum, mesorectum, internal iliac nodes, presacral nodes
- A boost of 5.4 Gy on the rectum and mesorectum
- CHT – CAPECITABINA 875 mg/m2/day

Magnetic Resonance Imaging (MRI) cT3N2 CRM (-)

JULY 2014 – after 8 weeks RCT

- Pain in epigastric region and in the right hypochondrium
- Vomiting
- Jaundice

POSITIVE DIAGNOSIS

- MUCINOUS ADENOCARCINOMA WITH SIGNET RING CELLS OF THE MIDDLE RECTUM cT3N0M0

MRI after RCT

- Favorable evolution of the tumor after the RCT, the reduction in tumor size and decrease in number of nodes in the mesorectum
Photomicrograph of the tumor highlights the characteristic cellular features.

**Abdominal ultrasound**
- Diffuse examination – ileus, minimal ascites
- Enlarged liver (AP diameter of LDH = 175 mm, the LSH = 94 mm)
- Bilateral HBD dilated to 3.5 mm. hepatic duct dilated to 7 mm, the left up to 6 mm. Dilated CBD
- Not clear about be detected
- Gallbladder - not evidenced.

**Abdomen-pelvis CT exam**
- Ascites
- Sarcormatosis gastrointestinal

**Lab**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Normal range</th>
<th>Type</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALT</td>
<td>45</td>
<td>up</td>
<td>R</td>
<td>up</td>
</tr>
<tr>
<td>AST</td>
<td>45</td>
<td>up</td>
<td>R</td>
<td>up</td>
</tr>
<tr>
<td>RBC</td>
<td>4.5</td>
<td>&gt; 4.5</td>
<td>W</td>
<td>up</td>
</tr>
<tr>
<td>WBC</td>
<td>5.5</td>
<td>&gt; 5.5</td>
<td>W</td>
<td>up</td>
</tr>
<tr>
<td>Hb</td>
<td>130</td>
<td>130-150</td>
<td>R</td>
<td>up</td>
</tr>
<tr>
<td>Plt</td>
<td>150</td>
<td>150-450</td>
<td>R</td>
<td>up</td>
</tr>
<tr>
<td>Na</td>
<td>140</td>
<td>135-145</td>
<td>R</td>
<td>up</td>
</tr>
<tr>
<td>K</td>
<td>4.5</td>
<td>3.5-5.5</td>
<td>R</td>
<td>up</td>
</tr>
<tr>
<td>Cl</td>
<td>105</td>
<td>100-105</td>
<td>R</td>
<td>up</td>
</tr>
<tr>
<td>Mg</td>
<td>2.5</td>
<td>2.0-2.5</td>
<td>R</td>
<td>up</td>
</tr>
<tr>
<td>Ca</td>
<td>9.5</td>
<td>9.0-10.5</td>
<td>R</td>
<td>up</td>
</tr>
<tr>
<td>P</td>
<td>3.5</td>
<td>3.0-5.0</td>
<td>R</td>
<td>up</td>
</tr>
<tr>
<td>Creatinine</td>
<td>0.5</td>
<td>0.5-1.0</td>
<td>R</td>
<td>up</td>
</tr>
<tr>
<td>Total bilirubin</td>
<td>1.5</td>
<td>0.3-1.0</td>
<td>R</td>
<td>up</td>
</tr>
<tr>
<td>Direct bilirubin</td>
<td>0.3</td>
<td>0.0-0.3</td>
<td>R</td>
<td>up</td>
</tr>
<tr>
<td>Alkaline phosphatase</td>
<td>100</td>
<td>100-300</td>
<td>W</td>
<td>up</td>
</tr>
<tr>
<td>AST</td>
<td>45</td>
<td>10-50</td>
<td>W</td>
<td>up</td>
</tr>
<tr>
<td>ALT</td>
<td>45</td>
<td>10-50</td>
<td>W</td>
<td>up</td>
</tr>
<tr>
<td>Total protein</td>
<td>7.5</td>
<td>6.5-8.5</td>
<td>R</td>
<td>up</td>
</tr>
<tr>
<td>Albumin</td>
<td>4.5</td>
<td>3.5-5.0</td>
<td>R</td>
<td>up</td>
</tr>
</tbody>
</table>
Abdomen-pelvis CT exam

- Dilated intrahepatic bile ducts with amputation of the ducts near the common bile duct due to adenopathy
- Increased thickness of the gastric antrum
- Micronodular aspect of peritoneum suggesting carcinomatosis
- Aortic-cave, latero-aortic multiples adenopathies
- Medium size ascites
- Bone metastasis: T9, T13, T12

Abdominal surgery

- Laparotomy
- Serohematic ascites
- Tumor mass in the right upper quadrant, which involves the liver, gastric antrum, angle of the right colon, greater omentum
- Peritoneal carcinomatous
- Multiple visceral and parietal carcinomatosis
- No signs of perforation or obstruction

Upper gastrointestinal endoscopy - antral ulcerated tumor

Mucinous gastric adenocarcinoma
- Signet Ring cells

HISTOPATHOLOGY of greater omentum

- Quasi-total infiltration of mucinous (colloid) adenocarcinoma

BUT.......

Losing a pound and finding a penny

- Significant pain in upper abdomen, vomiting, clinical and radiological signs suggesting obstruction
- ................abdominal surgery in emergency...

FINAL DIAGNOSTIC

- MUCINOUS ADENOCARCINOMA OF THE MIDDLE RECTUM STAGE III
- MUCINOUS ADENOCARCINOMA OF THE STOMACH STAGE IV
**LABORATORY – 3 DAYS AFTER SURGERY**

<table>
<thead>
<tr>
<th>Calcium</th>
<th>Phosphate</th>
<th>Magnesium</th>
<th>Proteinuria</th>
<th>Blood Urea</th>
<th>Creatinine</th>
<th>Infection</th>
<th>Albumin</th>
<th>CRP</th>
<th>ESR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 mg/dL</td>
<td>8 mg/dL</td>
<td>2 mg/dL</td>
<td>0.2 mg/dL</td>
<td>20 mg/dL</td>
<td>1 mg/dL</td>
<td>negative</td>
<td>3.5 g/dL</td>
<td>0.2 mg/dL</td>
<td>30 mm/h</td>
</tr>
</tbody>
</table>

**Gastric mucinous adenocarcinoma**

- Gastric mucinous cancer: more frequent antral, had deeper invasion, more frequent lymph node metastasis, more advanced pathologic stage, more frequent lymphatic invasion and lower disease-specific survival rates than patients who had NMGC

- However, mucinous histology per se was not identified as an independent prognostic factor.
  Cancer 2009;105:3981-90

No early mucinous adenocarcinoma

**DISCUSSION – mucinous adenocarcinoma facts**

- >6% for CRC and >9% for GC of tumor comprises a mucinous pattern upon histological examination
- Signet ring carcinoma: epithelial tumor >9% is made up isolated malignant cells containing intracytoplasmatic mucin
- Mucinous adenocarcinoma of stomach 2-4% of all gastric cancers
- Mucinous adenocarcinoma of rectum and colon: 10-20% all colorectal cancers
- American Joint Committee on Cancer of American Pathologist consider not to be a prognostic factor when matched with similar stage and grade (2000)
- NCCN guideline do not describe it that MA histology should influence the therapeutic decision (2014)

**Gastric mucinous adenocarcinoma**

- Negative mucin 1, cell surface-associated (MUC1) status; positive mucin 2 (MUC2) status
- Negative mucin 5AC, (MUC5AC) status and negative mucin 6, (MUC6) status (P < .001) were more frequent in MGCs
- Lower incidence of HER-2 protein over expression, HER-2 gene amplification, and EGFR protein over expression than NMGCs
  Cancer 2009;105:3981-90

**DISCUSSION – mucinous adenocarcinoma facts however**

- Consortium (2000) survival better for non-mucinous tumor
- Higher metastasis rates
- Mucinous tumors (MT) seems to have different oncogenic and molecular pathways (Zhang H Int J Oncol 1999)
- MT have more K-ras, less, 53 mutation, less apoptotic activity
- Rectal mucinous/ADK poor response to neo-adjuvant chemotherapy (Sinha V et al Gastrointestinal Oncology 2004)
- Poor (20%) identify a category of poor responders - not advisable to wait 6 weeks for completion of NACRT to the time of surgery

**Gastric metastasis**

- Gastric metastasis represents 1.2-1.8% of all gastric cancer (Zhou JJ, Miao XY WJG 2012)
- Majority of gastric metastasis were from breast cancer, melanoma, lung cancer
- Reported metastasis from ovarian carcinoma
- 21 mucin genes (designated MUC) have been identified in humans
- MUC1: positive in 57% gastric mucinous ADK and 10% of colorectal mucinous C
- MUC2: positive in 30-66% colorectal ADK and 90% gastric mucinous C

- Field carcinization???