PS-12-036
Colon adenocarcinoma developed from traditional serrated adenoma: Report of 6 cases
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Objective: Serrated polyps are relatively new group of premalignant lesions of the colon and rectum. Among all, traditional serrated adenoma (TSA) is the most rare and understudied type and has unique genetic profile and marked neoplastic potential, however a few cases of colon adenocarcinomas developed from TSA were described in the literature.

Method: We describe six cases of the colon adenocarcinoma developed from TSA.

Results: Patients' age was 47–76 years (mean age 60 years). Three of them were female (50 %), others were male. Only two patients presented with specific clinical symptoms (one with bowel obstruction, second - with blood in stool). In remaining cases the tumour was detected at colonoscopy performed on another occasion. In 4 cases tumour was located in the right side of the colon. In remaining cases - in sigmoid. Maximum diameter measured from 2.5 to 8 cm (mean 5.8 cm). On section tumours in all cases had polypoid appearance. Histological examination revealed carcinoma is situ in one case (17 %), well differentiated adenocarcinoma in three cases (50 %) and moderately differentiated adenocarcinoma in two cases (33 %).

Conclusion: Thus, colon adenocarcinoma developed from TSA is more common in older patients, has polypoid shape and is more often found in the right parts of the colon.

PS-12-037
Evaluation of the epigenetic pathway in primary and metastatic colorectal carcinomas
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Objective: DNMT1, DNMT2 and BMI1 are implicated in the regulation of protein expression through epigenetic modifications of DNA/RNA. Even though, their expression in primary colorectal carcinomas has been studied before, the epigenetic heterogeneity between primary and metastatic carcinomas has not been assessed.

Method: We examined the expression of DNMT1, DNMT2 and BMI1 in 38 cases of primary colorectal carcinomas and their respective hepatic metastases using immunohistochemistry. Nuclear staining was evaluated for all markers. Cytoplasmatic staining was additionally evaluated for DNMT2. The intensity of staining was graded in a scale of 1–3 and was multiplied by the % of positive cells.

Results: DNMT1 expression was higher in metastatic compared to primary tumours and in carcinomas compared to the adjacent non-neoplastic polypoid epithelium (p = 0.041 and p = 0.008, respectively). Metastatic tumours had a trend for higher levels of BMI1 and nuclear DNMT2 expression compared to their primaries (p = 0.060 and p = 0.054, respectively). DNMT2 and BMI1 expression was higher in primary tumours compared to the non-neoplastic epithelium (p < 0.001).

Conclusion: Our results demonstrate that aberrations of the epigenetic pathway may be implicated in the metastatic potential of colorectal carcinomas. The heterogeneity between primary and metastatic tumours needs to be accounted for in the evaluation of potential therapeutic targets.

PS-12-038
Bone formation (osseous metaplasia) in a rectal inflammatory polyp: Case report
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Objective: Osseous metaplasia is rarely detected in the gastrointestinal tract, in benign tumours. Heterotopic osseous metaplasia is a relatively infrequent finding and is more commonly seen in degenerative and regressive conditions than in neoplasms. Most of the reported cases are associated with malignant lesions.

Method: We are reporting a rare case of an inflammatory polyp in a 31 years old male who came to our hospital because he noticed blood in the stools and pain during defecation.

Results: Colonoscopic examination revealed a solitary polypoid lesion located in the rectum. On histopathologic examination, the polyp was a 57 × 23 × 20 mm fragment, gray-yellow mucosa covered and soft consistency. It was submitted in full for histopathological examination. Microscopically, HE stained sections showed that polyp was composed of inflammatory granulation tissue with numerous capillaries and accumulations of neutrophilic granulocytes and lymphocytes. Fragments of well-formed bony spicules were also found.

Conclusion: Benign lesions with osseous metaplasia are often seen with a histological background of chronic inflammation and/or ulceration. Different mechanisms have been suggested but the pathogenesis of osseous metaplasia still remains unknown.

PS-12-039
Adenocarcinoma of the rectum: A case report of an unusual localization
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Objective: Adenocarcinoma of the rectum is a rare histological type of colorectal cancer (0.1 % of all cases). We report a case of a rectal adenocarcinoma, an even rarer entity.

Method: A 64-year-old female presented with a rectal mass, localized 5 cm above the anus. Endoscopic biopsy revealed squamous carcinoma with mixed morphology. Our differential included adenocarcinoma. Chemoradiation was followed by abdomino-perineal resection, left oophorectomy, cholecystectomy and partial resection of lateral pelvic wall.

Results: Grossly, we identified a vague mass (9.5 × 5.3 cm) located 1.8 cm above the dentate line, infiltrating the entire rectal wall. Histopathology revealed neoplastic cells with high grade glandular and squamous morphology, focal clear cell morphology and extracellular mucin. Immunohistochemically, glandular areas were positive for CK18, PAS and Alcin-Blue and squamous areas for CK5/6. The diagnosis of high grade adenocarcinoma was made with metastasis in pelvic lymph nodes, the left ovary and lateral pelvic wall.

Conclusion: This is one of the very few reported cases of rectal squamous cell carcinoma, with a more aggressive clinical behavior than a rectal adenocarcinoma. As cell of origin, has been suggested ectopic squamous or reserve cells in the colonic mucosa or transformation of normal glandular or in situ adenocarcinoma cells into malignant squamous cells.

PS-12-040
Eosinophil granulocytes: Important modulators in ulcerative colitis
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Objective: Eosinophil granulocytes (EoG), important component of inflammatory infiltrate in ulcerative colitis (UC), are considered, by various studies, modulators of immune response and not only effectors of inflammation. We studied presence and distribution of EoG in UC to identify new data supporting this hypothesis.

Method: This study included 45 patients with UC, which were evaluated endoscopically, histologically and microscopically between the beginning of the study and 12 months later. Two fully-trained pathologists semi-qualitatively evaluated the number of EoG in lamina propria of colonic mucosa.