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Increased eosinophils in the muscularis propria of appendix may indicate early symptomatic appendicitis

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Gastroenterology Pathology

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Gastric cancer with enteroblastic differentiation (GCED): a case report and review of the literature

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Background: Gastric cancer with enteroblastic differentiation (GCED) is a rare kind of gastric cancer histological subtype. Compared with normal intestinal adenocarcinoma, GCED had distinct clinicopathologic features and genetic variation.

Methods: We present a rare case of a 47-year-old male with gastric cancer with enteroblastic differentiation.

Results & Conclusions: Microscopically, the case had primitive enteroid structures, consisting of cubic or columnar cells with clear cytoplasm, and immunohistochemical staining showed positivity for AFP, GPC3 and SALL4. Although rare, gastric cancer with enteroblastic differentiation has distinct clinicopathologic features. Therefore, in order to guide the treatment and predict the prognosis of patient, it is crucial for pathologists to be aware of this histological presentation and make judicious use of laboratory studies to exam its immunophenotype and genetic marker.

Methods: Seventeen patients with clinical diagnosis of acute appendicitis were identified as having acute symptomatology, but the resection specimens displayed a lack or low number of neutrophils (inclusion criteria; neutrophils <5) on histologic examination, so that the number of eosinophils in the muscularis propria were evaluated in these cases. Eosinophils and neutrophils found in the muscularis propria per high power field are compared using unpaired student-*t* test and *P* value less than 0.05 was considered to have statistical significance (*).

Result: No neutrophils or eosinophiles were identified in the muscularis propria of normal appendix tissue from colectomy specimens for cancer (*n* = 10). In symptomatic appendicitis cases (mean age at 17 old years; 15 less than 10 years old and 2 adults), there were higher counts of eosinophils (3.57 ± 0.49), when compared to the number of neutrophils per high power field (0.06 ± 0.06) (*P* = 0.0001*).

Conclusions: Our findings confirmed the presence of eosinophils in the muscularis propria as observed previously. In addition, our data indicate that eosinophils appeared more sensitive than neutrophils in correlation with early acute clinical symptoms for appendicitis, implying that increased eosinophils in muscularis propria may be a marker for early symptomatic appendicitis.

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Increased eosinophils in the muscularis propria of appendix may indicate early symptomatic appendicitis

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Background: The presence of neutrophils in muscularis propria is known to best correlate with clinical symptoms of acute appendicitis. Eosinophils present in the muscularis propria were noted in cases of acute appendicitis in 2000 (Carr, NJ. *Annals of Diagnostic Pathology* 2000;4:46–58), but the significance of their presence there has been unclear. The goal of this study was to investigate whether increased eosinophils in muscularis propria could be correlated with early symptoms of patients with clinical diagnosis of symptomatic appendicitis.

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The association of programmed death ligand-1 expression with MMR, and EBV status in gastric carcinoma in Oman

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Background: Stomach cancer is the most common cancer among males in Oman and the second most frequent among females from 1997 to 2007.

PD-L1 expression might be as a predictive biomarker for anti-PD-1/PD-L1 therapy. Because of the heterogeneity of PD-L1 expression, surrogate biomarkers for PD-L1 expression should be explored.

Aims: To evaluate programmed death ligand-1 (PDL-1) expression in gastric carcinoma and further assess its relationship with mismatch repair (MMR) proteins,