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Mast Cells as a surrogate marker for diagnosis of persistent eosinophilic esophagitis.

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Modeling Probability of Lymph Node Involvement			
Factor	Odds Ratio	95% CI	*P* Value
Age	0.95	(0.90–1.01)	.09
Sex: female (versus male)	1.08	(0.35–0.38)	.89
Grade: G2 (versus G1)	1.12	(0.34–3.67)	.85
Tumor size	0.98	(0.92–1.04)	.46
pT2: (versus pT1)	5.64	(0.95–33.52)	.06
pT3: (versus pT1)	9.98	(1.62–61.65)	.01
pT4: (versus pT1)	62.82	(5.36–736.66)	.001
No. of LNs examined	1.19	(1.09–1.30)	<.001

Histopathologic Features Caused by Use of ORISE Gel Injection in Endoscopic Resections: A New Form of Foreign Body Reaction Mimicking Deposition of Amyloid in Gastrointestinal Specimens

(Poster No. 30)

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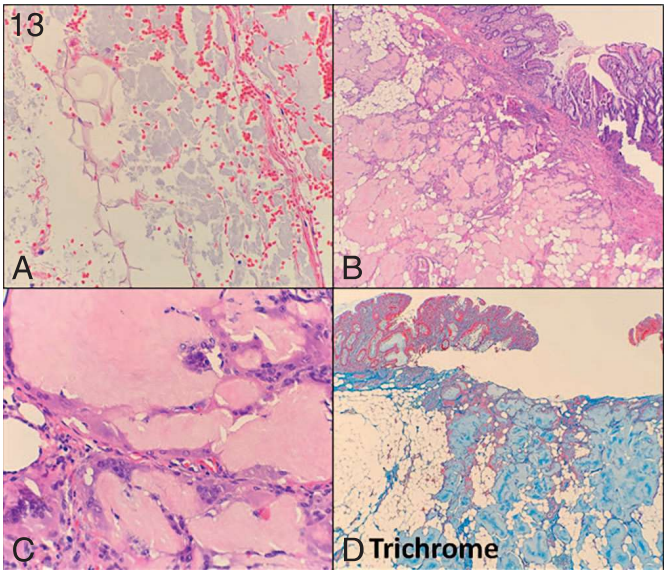
Context: ORISE Gel is a recently introduced synthetic submucosal lifting agent injected to facilitate the endoscopic resection of small mucosal gastrointestinal (GI) lesions. Recently, a few reports have described the histopathologic features in surgical specimens in the GI tract following the injection of this gel. We report our experience with the identification of this procedure-related artifact and potential mimickers.

Design: All subjects who underwent endoscopic mucosal resection or submucosal dissection with ORISE injection (January 2019–January 2020) were included in this study. H&E slides from all cases, including those who underwent subsequent resection, were reviewed. Mucicarmine, Trichrome, Alcian blue, and Congo red stains were performed on selected cases.

Results: On day 0 of the ORISE injection, H&E sections from 19 cases showed no significant histopathologic changes. In 1 case, a pale, grayish, indistinct and amorphous material was identified in the submucosa (Figure 13, A). Four of 19 cases underwent segmental resection (2 for colonic tubular adenoma, 1 for colonic adenocarcinoma, 1 for gastric adenocarcinoma) owing to failure of ORISE to lift or completely remove the lesion. Examination of these specimens identified submucosal globules and ribbons of a homogeneous, amorphous, and eosinophilic material surrounded by a foreign-body giant cell reaction resembling amyloid. However, Congo red was negative, and Trichrome showed light-blue staining (Figure 13, B through D). Mucicarmine and Alcian blue were negative. The average interval between ORISE injection and segmental resection was 49.8 days.

Conclusions: We want to raise awareness among pathologists of the histopathologic changes caused by injection of ORISE in GI tract specimens and avoid misinterpretation of this artifact.



Mast Cells as a Surrogate Marker for Diagnosis of Persistent Eosinophilic Esophagitis

(Poster No. 31)

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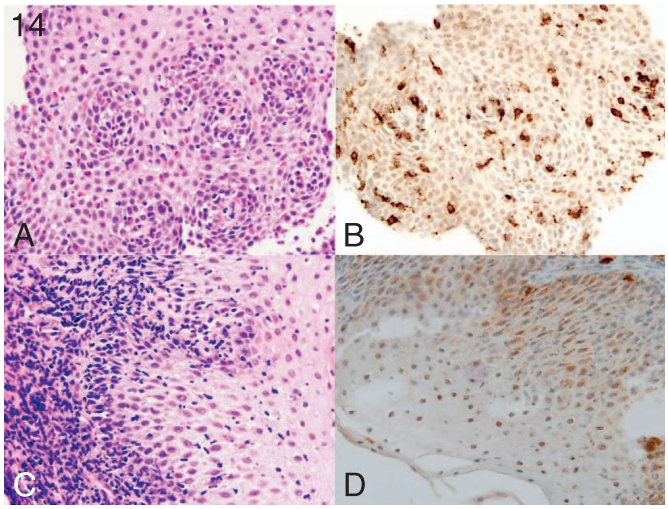
Context: Histologically, the hallmark of active eosinophilic esophagitis (EoE) is the presence of intraepithelial eosinophils (iEos). Recently, studies have evaluated the etiologic role of intraepithelial mast cells (iMCs) in pathogenesis of EoE and residual disease. We aimed to evaluate diagnostic and prognostic value of iMCs in EoE by its prevalence in esophageal biopsy cases in association with presence of iEos and/or lymphocytes.

Design: Esophageal biopsy cases were prospectively reviewed for presence of iEos, lymphocytes, and/or iMCs. An experienced gastroenterology pathologist at our institution quantitated the number of inflammatory cells. Immunohistochemistry (CD117) was used to highlight iMCs. Unpaired Student *t* test was used to analyze data with statistically significant *P* value of <.05.

Results: Thirty-one esophageal biopsy cases were examined. Eighteen (study group) cases had iEos and iMCs, with clinical diagnosis of EoE in 14 of these cases (Figure 14, A). The remaining 13 cases (control group) had intraepithelial lymphocytes (Figure 14, C) without any significant presence of iEos or iMCs, with clinical diagnosis of lymphocytic/reflux esophagitis. Unpaired Student *t* test showed statistically significant (*P* value = .001) number of iMCs (mean iMCs, 40.1 ± 6.1) in the study group compared to control group (mean iMCs, 3.1 ± 1.4; Figure 14, B and D). Thus, increased iMCs were found to be associated with increased iEos during active EoE, and treated EoE with reduced iEos. In contrast, increased iMCs were not associated with other studied diseases.

Conclusions: We conclude that iMCs can be used as a surrogate marker for diagnosis of EoE. Further studies are needed to determine prevalence of iMCs in residual disease, which can have clinical impact.



Basaloid Anal Squamous Cell Carcinoma With CD56 Expression Mimicking Neuroendocrine Carcinoma

(Poster No. 32)

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Context: Basaloid anal squamous cell carcinoma (SCC) is morphologically heterogeneous and may mimic other tumors. We received outside slides from a biopsy of an anal mass that was originally diagnosed as neuroendocrine carcinoma on the basis of morphology and expression of CD56 (Figure 15, A and B). However, further workup with pan-cytokeratin, P16, P40 (Figure 15, C), P63 (Figure 15, D), and HPV genotyping revealed the tumor to be HPV-related poorly differentiated basaloid SCC. Therefore, we retrospectively investigated the incidence of CD56 expression in anal SCC, a potential diagnostic pitfall.