

O-9

Neuroendocrine neoplasms diagnosed in the setting of inflammatory bowel disease: An appraisal of published literature and proposed management algorithm.

Mohamed M. Khamis^{1*}, Imad Karam², Gabriel D. Lang³, Nikolaos A. Trikalinos⁴.

¹Department of Medicine, Mercy Hospital St. Louis, Missouri, USA; ²Hematology and Medical Oncology, State University of New York (SUNY) Downstate Medical Center, Brooklyn, USA; ³Division of Gastroenterology, Department of Internal Medicine, Washington University, St. Louis, Missouri, USA; ⁴Division of Medical Oncology, Department of Internal Medicine, Washington University School of Medicine and Siteman Cancer Center, Missouri, USA.

BACKGROUND

Patients with inflammatory bowel disease (IBD) are at higher risk of developing malignancies, including neuroendocrine neoplasms, but the exact specifics of that are not well known. We reviewed the existing literature to better map the evidence surrounding this phenomenon.

METHODS

We performed a PubMed search from inception to September 2024 for patients with gastrointestinal neuroendocrine neoplasms (NENs) and either Crohn's disease (CD) or ulcerative colitis (UC). Eligible studies included abstracts, case reports, case series, and data from larger retrospective IBD cohorts. We extracted demographic and clinical information, including tumor grade, location, metastatic status, and mode of detection.

RESULTS

We identified 67 case studies with data available for a total of 108 patients (61.1% male), ranging from 14 to 87 years of age. The median duration from IBD diagnosis to NEN detection was 13 years. Fifty-five (50.9%) patients had Crohn's disease (CD) and 53 (49.1%) had UC. UC patients were older at initial NEN diagnosis (mean: 48.7 years) than CD patients (mean: 40.1 years) and had a higher metastatic rate (39.6% vs. 18.2%). In general, most NENs were low-grade (69.4%), while 20.4% were high-grade and 8.3% were mixed. The most common tumor locations were the rectum (29.6%) and appendix (27.8%), with rectal and colonic NENs more prevalent in UC and small bowel or appendiceal NENs more common in CD. At diagnosis, 71.3% of patients had localized disease. For high-grade NENs, 86.4% of cases were metastatic, compared to 9.3% for low-grade tumors. Only 10.2% of NENs were detected via endoscopic surveillance.

CONCLUSIONS

Our findings reinforce the need for increased awareness and tailored surveillance strategies in IBD, particularly given the distinct tumor locations in UC versus CD and the high metastatic potential of high-grade tumors. Surveillance may be most beneficial after 10 years of IBD or around 44 years of age, focusing on rectal lesions in UC and appendiceal or small bowel lesions in CD. Future studies are needed to solidify optimal imaging protocols and elucidate mechanisms by which chronic inflammation fosters NEN development.