Unveiling the connection: exploring the link between rash and diarrhea

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Introduction

Diarrhea is a commonly encountered problem in Hospitalist Medicine. We present a case of intractable abdominal pain with diarrhea, Later diagnosed as progression of a rare preexisting condition

Case Presentation

•A 74-year-old male presented with intractable nausea, vomiting abdominal pain, abdominal distention, diarrhea, and loss of appetite for the past 2 weeks. Abdominal pain was spasmodic, generalized, moderate intensity, without any precipitating or relieving factors and brown-yellow non-bloody diarrhea.

• Interestingly he had a similar episode of diarrhea 3-4 weeks ago, at that time was evaluated in ER and discharged on antibiotics for presumed gastroenteritis. Patients denied travel history or outside food consumption on both presentations.

•Physical examination revealed lethargy, generalized abdominal tenderness on superficial palpation along with macular-papular rash over the entire back. Initial workup including WBC count, blood cultures, C difficile, stool parasite/ova, stool WBC count, Anti-Tissue Transglutaminase antibody were negative. Chemistries were within normal limits.

• Imaging significant for small bowel wall thickening, with no obstruction. Patient was started on empiric antibiotics. CTA abdomen revealed less than 50% celiac artery stenosis thus ruling out acute bowel ischemia.

• Upon further interviewing regarding the patient's rash, he reported past medical history of Cutaneous Mastocytosis, which had been confirmed with skin biopsy and bone-marrow biopsy, but currently was not taking any treatment.

•While de-escalating antibiotics, we started H1/H2 blockers (Loratadine and Famotidine). A progressive improvement in diarrhea was observed. Patient was discharged home, and outpatient EGD, and colonoscopy were scheduled to rule out gastric/ duodenal ulcers.

Discussion

•Mastocytosis is the clonal proliferation of mast cells (MC) characterised by multifocal clusters of abnormal MC within multiple organ systems.

•Depending on tissue/Organ involvement (skin and/or internal organs), it is classified as Cutaneous mastocytosis (CM) or Systemic mastocytosis (SM) respectively. Increased cytokinin secretion from mast cells (including histamine, heparin, leukotrienes, prostaglandins, and PAF) activates H1/H2 receptors causing not only cutaneous manifestations but also increased gastric acid secretion, (predisposing to gastric and duodenal ulcers, Upper GI bleeding, abdominal pain)[6]. Thus SM can frequently present as pruritic maculopapular rash/urticaria[2], and chronic recurrent diarrhea, nausea, and weight loss[1].

•A study comparing histopathological samples for SM, inflammatory bowel disease, eosinophilic colitis, etc, found that in all SM patients, D816V KIT mutation was observed [4]. Another study found that adult-onset CM more frequently progressed to SM[9][10]

•The definite diagnosis of SM involves biopsy of affected tissues including immunohistochemical stains (CD117and CD25), serum tryptase(>20 ng/mL) [7], and MC aggregates in gastrointestinal lamina propria [8]. Treatment depends on the disease subtype. H1 antagonists treat skin symptoms whereas H2 antagonists are generally used as 1st-line therapy for GI symptoms[3]

Conclusion

Diarrhea is a common symptom of systemic mastocytosis. However systemic mastocytosis is a rare cause of diarrhea. There should be a high degree of suspicion in patients with otherwise unexplained symptoms of abdominal pain and diarrhea, especially if pruritic maculopapular skin rash is also present

References

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