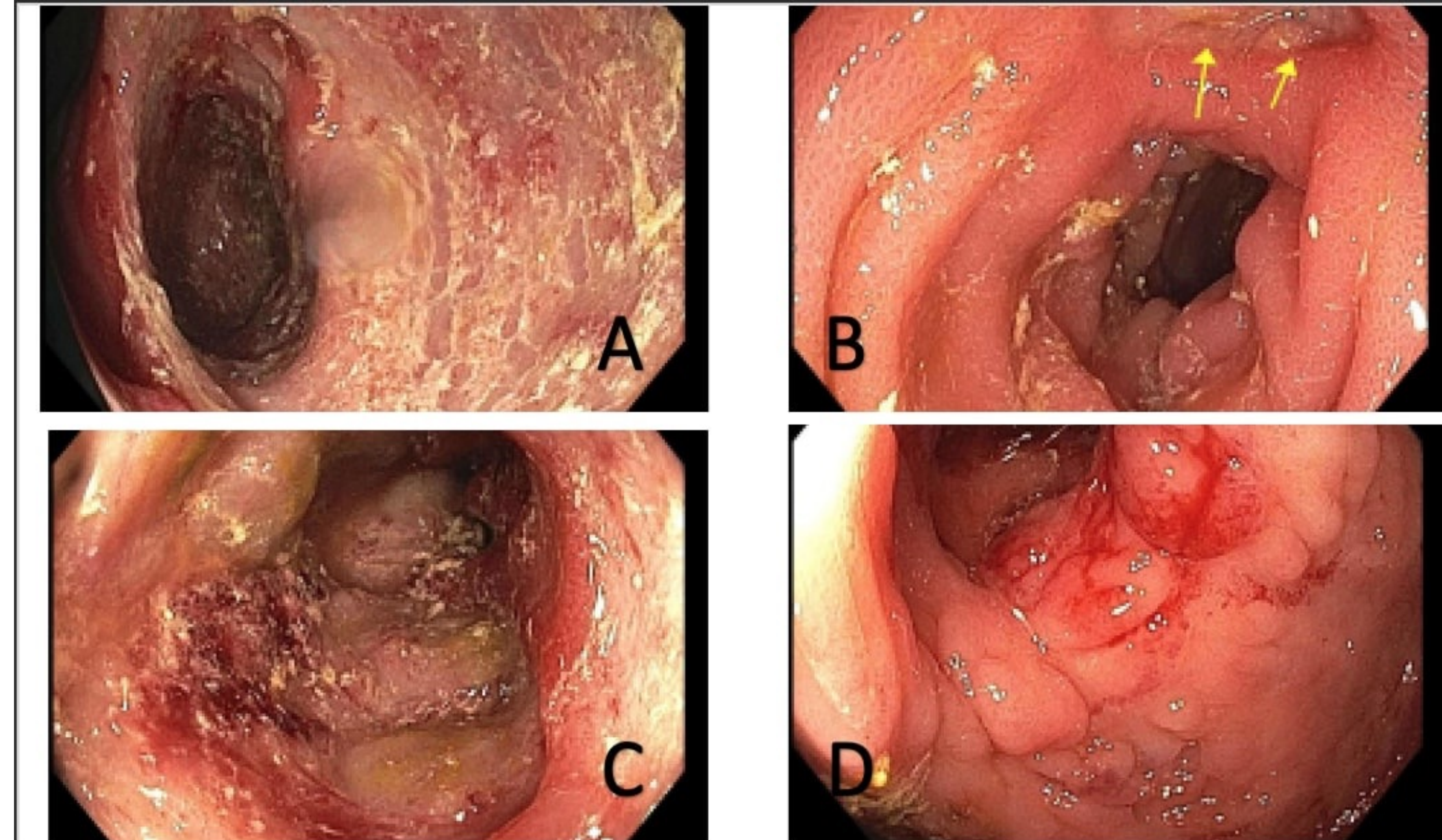


Introduction

- The clinical benefits of immune checkpoint inhibitors (ICIs) have been associated with immune-related adverse events (irAEs), with ICI-associated colitis among the most reported.
- ICI-associated colitis is routinely treated with immunosuppressive therapy, including corticosteroids and anti-TNF agents.
- Recent studies have suggested fecal microbiota transplant as a potential treatment for refractory ICI-associated colitis.

Case Description/Methods

- Middle aged female with multiple sclerosis in remission and stage IV melanoma with bone and pulmonary involvement diagnosed 3 years prior.
- She underwent palliative radiation followed by 4 cycles of ipilimumab and nivolumab initially. Despite this therapy she had cancer progression.
- She was then started on treatment with cisplatin, vinblastine and dacarbazine (CVD), however she failed to respond. She was switched to targeted therapy with encorafenib and binimetinib.



A: Altered anatomy near cecum, B: Ulcer in terminal ileum, C: Ulcers in ascending colon, D: Ascending colon narrowing

- Within 2 months, she was admitted to the hospital with anemia and hypotension, endoscopic evaluation revealed multiple intestinal and colonic ulcers. Based on these findings she was suspected to have ICI enterocolitis and received two cycles of infliximab plus high dose corticosteroids.
- She resumed encorafenib and binimetinib after clinical improvement and started single agent nivolumab. She was readmitted within 3 months and again at 4 months after for anemia and melena despite receiving additional treatment with vedolizumab and multiple courses of high dose corticosteroids. She was then treated with ustekinumab; however, she was again hospitalized a fourth time for similar symptoms.

- Decision was made to treat her refractory colitis with fecal microbiota transplant (FMT) as compassionate use. She had a remarkable response, with complete resolution of her GI symptoms with no additional immunosuppressive therapy or hospitalizations.
- However, patient's cancer continued to progress. Her course was further complicated by oculomotor nerve dysfunction and ultimately was transitioned to hospice care and passed away 4 months later.

Conclusion

- Fecal microbiota transplant has emerged as novel therapeutic option for treatment of refractory ICI-associated colitis.
- Combination treatment with ICI and targeted therapy may be a risk factor for more severe colitis with significant ulcers and refractory disease course.
- Further studies are needed to assess the risk factors related to combination therapy and guide more effective treatment.