



# Clinicopathological characteristics and management of high-grade immune-related colitis



Osama Abu-Shawer MD MS; Khaled Alsabbagh Alchirazi MD; Ashraf Almomani MD; Antoine Boustany MD MPH; Abel Joseph MD; Mohammed El-Dallal MD MS; Muhammad Haseeb MD MS

## BACKGROUND

- ❖ The incidence of immune-related adverse events (irAEs) is increasing due to the rapid expansion of immune-checkpoints inhibitors (ICIs) use.
- ❖ Recent studies showed that immune-related colitis (IRC) is the most common high-grade irAE. However, limited data are available regarding the clinical course and outcomes of severe and life-threatening (CTCAE grade  $\geq 3$ ) IRC.
- ❖ Therefore, we conducted a retrospective cohort study exploring the characteristics, treatment course, and outcomes of high-grade IRC.

## METHODS

- ❖ At our tertiary care hospital, we established the ITOX service; one of the first inpatient services in the country devoted to mitigating irAEs.
- ❖ We then incorporated a novel platform into the electronic medical record (Epic) to triage patients admitted with irAEs to the ITOX service.
- ❖ We reviewed the charts of patients admitted to the ITOX service with high-grade IRC within the last year and collected clinical, endoscopic, and histopathological data.

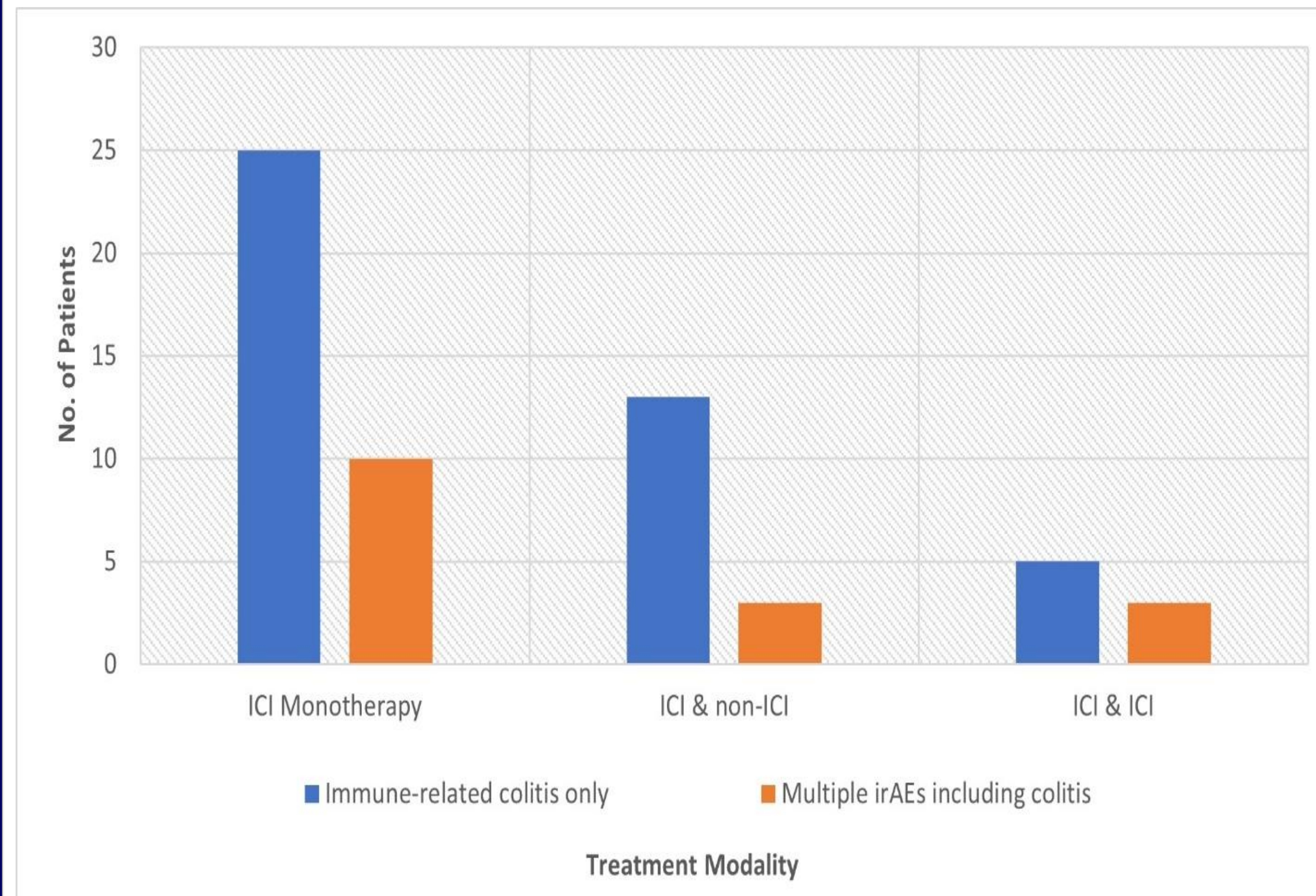


Figure 1: The treatment regimen & number of irAEs

## DISCUSSION

- ❖ High-grade IRC is associated with high-risk endoscopic and histopathological features and high rates of hospital readmission. These features could represent markers of disease severity and can be utilized to guide the use of high-dose steroids and other immunosuppressants.

## RESULTS

- ❖ A 59% of the cohort received ICI monotherapy; 14% received a combined ICI therapy, and 27% received a combination of ICIs and non-ICIs. Thirteen patients (22%) had multiple irAEs and 78% had IRC only at the time of presentation.
- ❖ Imaging studies showed wall thickening, mucosal hyperemia, and air-fluid level. Endoscopy findings range from normal to severe inflammation with deep mucosal ulcerations. The biopsy results showed regenerative changes, increased epithelial cell apoptosis, and intraepithelial lymphocytosis.
- ❖ Most patients 90% had a sustained response to steroids and deemed steroid-sensitive; 1mg/kg/day (74%), >1mg/kg/day (7%), and < 1mg/kg/day (9%). Only 10% of the patients had steroids-refractory IRC and needed other immunosuppressants. The presence of deep ulcerations and erosions associated with steroids-refractory IRC. Most patients (93%) were discharged on steroids.
- ❖ The average length of hospital stay was 15 days, with a readmission rate of 71% within a year with relapsed IRC. One-third (33%) of the patients resumed ICIs after the resolution of high-grade IRC as maintenance therapy or a rechallenge due to disease progression.

## CONTACT

Osama Abu-Shawer, MD MS [Abushao@ccf.org](mailto:Abushao@ccf.org)