Introduction

# Gastrointestinal (GI) complications of multiple myeloma (MM) treatment are common and include nausea, constipation and diarrhea. However, acute gastrointestinal events like bleeding and perforations are rare.

# Very few cases of gastrointestinal perforations in MM have been reported in the literature.

# We aimed to describe the characteristics and outcomes of patients with MM that had colonic perforations during their treatment.

Methods

# This was a retrospective study that included patients from all three Mayo Clinic sites between 1997 and 2020 who had MM and developed a GI perforation.

# All patients were diagnosed with GI perforations based on CT scans and treated with surgery.

# Patients diagnosed with amyloidosis, a perforated colon complicating neutropenic colitis during stem cell transplantation and those with a perforation due to colonic cancer were excluded.

Figure 1: bowel perforation in a CT scan in one of the patients

Results

# 30 patients were identified.

# All perforations were located to the colon.

# The median age at GI perforation was 66 (IQR 60-71). Twenty-two (70%) were males.

# The median time from the diagnosis of MM to perforation was 4 months (IQR 2-28).

# All patients received steroids prior to the perforation (doses ranged from 10 mg once weekly to 40 mg day 1-4, 9-12, 17-20 q 28 days) while four of them (11%) were on high dose dexamethasone without chemotherapy.

# Fourteen patients got high dosed of dexamethasone (defined as higher than 40mg dexamethasone once a week).

# 14 patients (47%) were on bortezomib while perforating.

# In twenty-four patients (80%), the perforations were associated with diverticulitis.

# All patients underwent colectomies and 25 patients required ileostomies (3) or colostomies (22) with all surviving the surgery.

# Treatment with steroids was resumed in 23 patients with no further gastrointestinal complications.

# The median OS was 20 months (IQR 8-59) following perforation.

Conclusions

Intestinal perforations in MM are rare and, in our series, always occurred with dexamethasone doses higher than 10 mg per week.

Urgent surgery is lifesaving and resumption of anti-myeloma treatment appears to be safe, with no significant risk of re-perforation.