ADVERSE DRUG REACTIONS, INCLUDING SJS, TEN

PROGNOSTIC IMPLICATIONS OF CO-OCCURRING DERMATOLOGIC AND GASTROINTESTINAL TOXICITY FROM IMMUNE CHECKPOINT INHIBITION THERAPY FOR ADVANCED MALIGNANCIES

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Background: The use of immune checkpoint inhibitors (ICIs) for the treatment of cancer has introduced multisystem toxicities known as immune-related adverse events (irAEs). Dermatologic and gastrointestinal (GI) irAEs are among the earliest and most common. There remains a poor understanding of co-occurring ICI-induced rash and colitis and their implications.

Objective: To characterize the manifestation, incidence, and impact of co-occurring ICI-induced rash and colitis.

Materials and Methods: Patients treated with ICIs at Massachusetts General Hospital (MGH) between January 2011 and January 2018 who had confirmed or highly probable GI irAE based on endoscopic and pathologic findings were identified. Medical record review further identified patients who also developed dermatologic irAE (exposed group). Statistical methods included chi-squared and Wilcoxon rank-sum for comparison of baseline characteristics, logistic regression for categorical outcomes, and Cox-proportional-hazards modeling for survival data.

Results: Of the 67 patients with ICI-induced colitis, 28 (42%) also developed skin toxicity (exposed). Baseline characteristics (age, sex, tumor type and stage, ICI regimen and number of cycles, and additional cancer treatments before and after irAE) between the exposed and control groups were similar. Median time from ICI initiation to development of colitis and rash was 70 days (15-760 days) and 32.5 days (2-260), respectively. Exposed subjects were more likely to develop an irAE of another organ system, compared to controls (odds ratio [OR], 18.5; P = .001). In multivariate survival analyses, the exposed group demonstrated a significant benefit in progression-free survival (hazard ratio [HR], 0.32; P =

.001) and overall survival (HR, 0.23; P = .004).

Conclusions: The co-occurrence of ICI-induced rash and colitis, which may indicate increased risk of developing additional irAEs, may be an early marker of clinical response and improved survival. Dermatologists, gastroenterologists, and oncologists should collaborate for timely diagnosis and appropriate management of these increasingly prevalent patients.