Poster 66: Ocular Toxicity in Patients Receiving Antibody–Drug Conjugates for Gynecologic Malignancies in a high-altitude environment

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Topic
Quality of Life/Palliative Care

Objectives
Ocular toxicity is a well-described adverse effect of antibody–drug conjugates (ADCs). Environmental factors, including high-altitude exposure, may exacerbate ocular surface disease through hypoxia, reduced humidity, and increased ultraviolet radiation. This study evaluates the incidence of ocular toxicity in a high-altitude patient population as well as clinical and demographic associations.

Methods
We performed a retrospective cohort study of 120 patients with gynecologic malignancies treated with ADCs at a high-altitude institution. Clinical, demographic, and treatment data were collected. Ocular toxicity incidence, type, and severity were analyzed, and patients with and without ocular toxicity were compared using chi-square tests, Fisher's exact test, and t-test.

Results
Of 120 patients, 61 (50.8%) developed ocular toxicity. Majority of patients were on mirvetuximab (n-83, 69.2%), followed by trastuzumab deruxtecan (n=20,16.7%) and tisotumab vedotin (n=18, 15%). Median age was 59 years; most patients had ovarian, fallopian tube, or primary peritoneal cancer (73.3%) with high-grade serous histology (67.5%). Common toxicities included keratitis (n=27,44.3%), dry eye (n=21,34.4%), and blurred vision (n=20,32.8%), predominantly grade 1 (n=35,57.4%). Most patients continued therapy without dose adjustments (n=34,55.7%). N=10 (16.4%) required dose reduction and n=7 (11.5%) discontinued treatment. No significant associations were identified between ocular toxicity demographic, clinical, or treatment variables (all $p > 0.05$). Patients who developed ocular toxicity were more likely to be alive at last follow-up compared to those without toxicity (62.3% vs. 37.3%, $p = 0.01$).

Conclusions
In this high-altitude cohort, the incidence of ocular toxicity among patients receiving ADCs was comparable to the rates in prior published data. The observed association between ocular toxicity and improved survival may be related to improved treatment effect. While dry eye is common in high-altitude environments, it is reassuring that altitude-related hypoxia and ocular surface stress does not seem to contribute significantly to ocular toxicity in this population.