Poster 36: Paclitaxel and anti-emetic hypersensitivity reaction rates in gynecologic oncology patients: a quality improvement project

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Topic
Quality & Healthcare Systems

Objectives
We sought to assess the impact of slow infusion of paclitaxel on hypersensitivity reaction (HSR) rates at a single academic-community hybrid institution.

Methods
Included patients who received first or second lifetime paclitaxel doses with a gynecologic or medical oncologist between 10/2023 and 10/2024 were compared to those receiving slow infusion protocol between 2/2025 and 8/2025. The slow infusion protocol began with sequential 1 mL infusions at rates of 10 mL/hr, 20 mL/hr, and 30 mL/hr, followed by infusion at the full standard rate of 166mL/hr. The primary outcome was HSR rate, and secondary outcomes were HSR grade and rechallenge. Descriptive statistics, univariate and multivariate analyses were conducted.

Results
A total of 460 patients (n = 320 pre- and n = 140 post-intervention) were analyzed. Median age was 66 years (IQR 59 – 75 years), with 34% (n = 155) treated by a gynecologic oncologist and 66% (n = 305) by a medical oncologist. Primary malignancies included lung (27%, n = 123), breast (20%, n = 90), ovary (17%, n = 80), uterine (17%, n = 78), esophageal (9%, n = 43), and other cancers (10%, n = 46). The overall paclitaxel HSR rate was 7% in the pre-intervention group and 10% in the post-intervention group (p = 0.042). Medical oncology patients had significantly increased HSR rates (4% vs 10%, p = 0.034) whereas gynecologic oncology HSR rates were not statistically different (12% vs 10%, p = 0.62). There was no difference in HSR grade (p= 0.12) or paclitaxel rechallenge (31% vs 43%, p = 0.31) between the two cohorts. The post-intervention group had significantly higher odds of experiencing a HSR (OR 1.80, 95% CI 1.06-3.07, p = 0.030) compared to the pre-intervention cohort, as did female (OR = 3.33, 95% CI 1.60-6.84, p = 0.001) and younger age (OR = 0.98, per year, 95% CI 0.96 – 0.998) (Table). In multivariable analysis, slow infusion remained significantly more likely to have HSR (OR = 1.72, 95% CI 1.001-2.96, p = 0.049).

Conclusions
Slow infusion of paclitaxel resulted in significantly more HSRs among all comers. As a result, our institution has resumed standard paclitaxel administration. Slow infusion may decrease paclitaxel HSR in certain populations, but institution-specific protocols should be implemented based on specific population considerations.

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