1777. Corticosteroid Use Following the Onset of Invasive Aspergillosis is Associated with Increased Mortality: A Propensity Score-Matched Study

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**Background.** The safety of corticosteroid use (CSU) during active infection is controversial. In the invasive aspergillosis (IA) literature, CSU is typically defined using the time period prior to IA onset. Clinicians caring for patients with IA are unable to control CSU prior to IA onset. The more clinically relevant question is whether CSU after IA onset is harmful.

**Methods.** Patients hospitalized at our institution from 2004 to 2014 with IA were retrospectively identified. CSU, defined as the average daily prednisone equivalent dose during the 7-day period following IA onset, was calculated for each patient. A CSU cut-off of 7.5 mg was used to assign patients to treatment (>7.5 mg) or control (<7.5 mg), including no CSU) groups. A propensity score (PS) was generated to predict group assignment. Nearest neighbor matching was performed with a caliper width of 0.2. A Cox proportional hazards model was used to assess survival 6 weeks after IA onset.

**Results.** PS matching generated 61 matched pairs (122 patients). Baseline characteristics did not differ significantly between groups (Table). CSU was associated with increased mortality (PS adjusted hazard ratio [HR] 2.91, 95% CI 1.32–6.40). In IA patients, a trend towards lower mortality was noted if corticosteroid dose was tapered to 7.5 mg/day (HR 0.68, 95% CI 0.46–1.02).

**Conclusion.** CSU after IA onset is associated with increased mortality. In IA patients with CSU, efforts to reduce corticosteroid dose may be beneficial.

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**Figure.** Kaplan–Meier curves comparing 6-week survival

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| Table: Propensity matched patients at IA Onset |
|-----------------------------------------------|
| CSU (n = 61) | Control (n = 61) | P |
| --- | --- | --- |
| Age, years | | |
| 57.6 (49.2–65.9) | 53.2 (42.5–63.2) | .27 |
| Male | 59.0% (36/61) | 54.1% (33/61) | .72 |
| CSU >7.5 mg prior to IA | 78.7% (48/61) | 70.5% (43/61) | .41 |
| Leukemia | 52.5% (32/61) | 49.2% (30/61) | .86 |
| Allergic bone marrow transplant | 26.2% (16/61) | 29.5% (18/61) | .84 |
| Graft vs. host disease | 5.5% (2/61) | 11.5% (7/61) | .16 |
| Neutropenia | 48.3% (28/58) | 42.9% (24/56) | .58 |
| Solid organ transplant | 11.5% (7/61) | 6.6% (4/61) | .53 |
| Obstructive lung disease | 21.3% (13/61) | 24.6% (15/61) | .83 |
| Diabetes mellitus | 26.2% (16/61) | 29.5% (18/61) | .84 |
| Pulmonary IA | 94.8% (55/58) | 94.9% (56/59) | .99 |
| Coinfection | 23.0% (14/61) | 21.3% (13/61) | .99 |

Data presented as median (interquartile range) or % (n with data available)

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**Disclosures.** All authors: No reported disclosures.