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Abstract

Stevens-Johnson Syndrome and Toxic Epidermal Necrolysis in US adults

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Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN) are life-threatening disorders. The incidences, mortality and cost of SJS and TEN in US adults are not well-characterized. We analyzed data from the 2009-2012 Nationwide Inpatient Sample, containing a representative 20% sample of all hospitalizations in the US. SJS, SJS/TEN and TEN were identified by a validated algorithm using ICD-9- CM codes. The mean incidences of SJS, SJS/TEN and TEN were 9.3, 1.6, and 1.9 per million people per year, respectively. Predictors of hospitalization included race (Black, Hispanic, Asian, Native American, other/mixed), insurance status (Medicare, self-pay), and an increasing number of chronic conditions ($P < 0.05$ for all). Significantly prolonged length of stay and higher costs of care (SJS: 9.8 ± 0.3 days, $\$21,437 \pm 807$; SJS/TEN: 16.5 ± 1.0 days, $\$58,954 \pm 5,238$; TEN: 16.2 ± 1.0 days, $\$53,695 \pm 4,037$) were observed in comparison with all other admissions (4.7 ± 0.02 days, $\$11,281 \pm 98$). Adjusted mortality was 4.8% for SJS, 19.4% for SJS/TEN and 14.8% for TEN. In multivariate regression models, SJS/TEN were associated with ocular infection/inflammation (30.28 [26.41-34.72]), blindness/vision defects (2.30 [1.83- 2.89]), septicemia (5.73 [5.23-6.27]), renal failure (2.20 [1.98-2.43]), leukemia (2.86 [2.19-3.75]), non- Hodgkin's lymphoma (2.92 [2.25-3.80]) and HIV/AIDS (3.71 [2.54-5.43]). Predictors of mortality included increasing age, increasing number of chronic conditions, infection (septicemia, pneumonia, tuberculosis), hematological malignancy (non-Hodgkin's lymphoma, leukemia) and renal failure ($P \leq 0.03$ for all). In conclusion, the incidence of SJS appears to be higher than previously reported, though mortality rates are lower. Further studies are needed to confirm mortality findings to improve prognostication of SJS/TEN.