Abstract:

Objective: At our hospital, a shortage of sterile saline bags led to changing ceftriaxone from intravenous infusion to intravenous push. We examined if this change led to an increase in adverse reactions.

Methods: We conducted a retrospective chart analysis on patients 18 and older that were administered ceftriaxone in the ED between January to March 2018. Research assistants recorded information about possible adverse reactions. Adverse reactions were defined as any noxious or unintended response to a drug given at therapeutic doses. Potential adverse reactions were independently reviewed by three EM clinicians and confirmed by an adverse drug reaction probability scale. The primary outcome was the rate of adverse reactions for IVP administration of ceftriaxone.

Results: 831 encounters were identified, 77 were excluded due to erroneous or missing data, and a total of 753 were included. Study demographics include an average age of 52.8, a female majority (54.2%) and predominantly black patient population (41.5%). A total of 24 cases were potential adverse reactions. After independent review, only one of the 24 cases was determined to be an adverse reaction to ceftriaxone from IVP. The total adverse event rate observed was 1/753 or 0.13%.

Conclusions: Our study demonstrates that the rate of adverse reactions for IVP is lower than previously reported. Given the demonstrated safety of IVP administration, future studies are warranted to determine the implications for ED efficiency and cost benefits from this change in drug delivery.

Reference: