Using Hyaluronidase to Treat Drug Extravasations: The Journey from an Evidence Based Strategy to Use in the Clinical Setting
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Problem:
Extravasation is a potentially serious complication of intravenous therapy that often contributes to a host of negative patient outcomes, notwithstanding a significant financial burden to hospitals. Extravasation results when a caustic medication inadvertently enters the surrounding tissue and causes complications such as pain, surgery with skin grafting, increased length of hospital stay, and decreased patient satisfaction. Preventing IV extravasation is an interdisciplinary goal of nursing, pharmacy, medicine, patient safety, and performance improvement.

Evidence:
Based on new information acquired at a National Intravenous (IV) Nursing Conference, a staff nurse initiated a plan to utilize Hyaluronidase for IV extravasation. Hyaluronidase is an enzyme that breaks down hyaluronic acid, a component of the body's connective tissue. Following extravasation, administration of hyaluronidase promotes diffusion and absorption of extravasated fluids, thereby reducing local concentrations of the toxic substance.

Strategy:
This presentation will outline the steps to implement a nurse-led multidisciplinary approach to prevent IV extravasation. The staff nurse initiated the review of current IV management practice and convened a multidisciplinary team that identified the problem, reviewed the evidence, developed an evidence-based medication guideline, implemented an organization-wide education plan and created a mechanism for online documentation.

Practice Change:
Prevention was the goal of all interdisciplinary participants. This was accomplished by an educational sweep through a computer module tool, nursing grand rounds, and presentations at staff meetings. Initiation of the drug rescue was performed when extravasation occurred.

Evaluation:
Results were obtained using pre/post results of serious IV complications.

Results:
Successful outcomes were evidenced by greater than 85% of staff completing the education. In 2008, 4 serious IV complications occurred. In 2010, 0 serious complications resulted.

Recommendations:
A protocol is being developed to expedite the use of hyaluronidase administration.

Lessons Learned:
It was difficult to measure the total impact of the rescue due to improved documentation and reporting of complications.

This initiative is a compelling example of moving evidence based information to application and evaluation.
Bibliography
Infusion Nurses Society Annual Meeting and Industrial Exhibition, intervention protocol. 2008: 38-44.
