

# MEDICATION EXTRAVASATION MANAGEMENT AND OUTCOMES IN PATIENTS WHO EXPERIENCED AN EXTRAVASATION OF MEDICATION DURING HOSPITAL ADMISSION: A MIXED-METHOD STUDY

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## Relevance

- **Extravasations** are a **complication** of intravenous (IV) medication administration.
- Extravasation is the unintentional leakage of vesicant drug into surrounding tissue → potential **tissue damage**.
- Data on extravasation management and patient outcomes is limited.

## Aim of the study

**To determine prevalence, nature, management strategies and patient reported post-discharge outcomes of extravasations.**

## Methods

- A **retrospective** study at Elisabeth TweeSteden Hospital, The Netherlands.
- Patients who experienced extravasations between **01-01-2022 and 01-01-2024**.
- Eligible patients were invited to complete a questionnaire.
- Data extracted from the **Electronic Health Record system** and **questionnaire** were analysed (**descriptive statistics**).
- **Outcomes:**
  - Primary: prevalence and nature of extravasations, along with management strategies used.
  - Secondary: involved patients' post-discharge experiences and outcomes.

**Results** of 200 patients with 205 extravasations.

- **Prevalence of extravasations:** **0.014%** of IV administrations.
- **Nature:**
  - Most frequently extravasated drugs: **anti-infectives (32.7%)**.
  - Most common location: **in the arm (61.5%)**.
  - Most common symptoms on day 1: **swelling (70.8%), redness (40.9%) and pain (38.5%)** → resolved within 2-3 days.
- **Management strategies:**
  - Cold compresses in 33.7% (n=69).
  - Hot compresses with hyaluronidase 31.7% (n=65).
  - Hot compresses alone 15.6% (n=32).
  - Hyaluronidase administered in 62.9% (n=44) of cases, particularly for grade 2 and 3 extravasations.

**Results** of 41 patient questionnaires.

- **70.7%** of patients recalled having **swelling, pain, and redness** and **46.3%** a **burning sensation** after extravasation during admission.
- **Post-discharge:** **34.1%** of patients **continued having symptoms**.

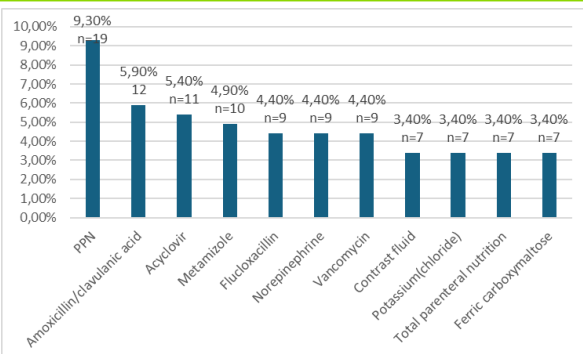


Figure 1: Most frequently extravasated drugs.

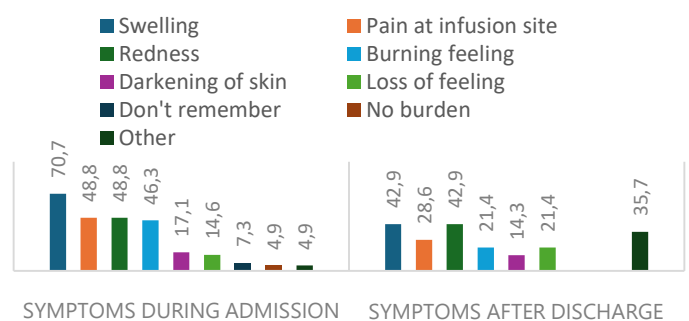


Figure 2: Patient reported symptoms experienced during admission n=41 and after discharge n=14.

## Conclusions

- This study provides comprehensive data on the prevalence, nature, management strategies, and patient outcomes related to medication extravasation.
- Improvement in management practices and post-discharge follow-up is needed.

