EXTRAVASATION: A RETROSPECTIVE ANALYSIS of 27 REPORTS

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Background
In 2003, an extravasation guideline and a standardized report formulary were implemented in our hospital. Cases are regularly analysed by an expert group including a clinical oncology nurse, an oncology pharmacist, an oncologist and a clinical pharmacist.

Objectives
- To evaluate the efficacy of the implemented guideline,
- To identify rates and causes of extravasation,
- To implement preventive actions.

Results

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<th>Frequency</th>
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<tr>
<td>0.03-0.075% extravasation per year</td>
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<td>82% peripheral</td>
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<td>82% during administration</td>
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<td>30% during summer</td>
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Type of drugs
- 33% vesicant (2x/9) saline flush out
- Paclitaxel 6, mitomycin 1, VAD 1, vinorelbine 1
- 65% irritant: fluorouracil 6, oxaliplatine 4, carboplatine 3, others 4

Symptoms
- Induration and oedema (16 cases);
- Pain (14);
- Redness (10);
- Asymptomatic (1)

No tissue damage was noticed in any cases
All extravasations occured in adults; none in children

Factors identified in 19 cases (70%) and were linked to:

The administration technique, 11 cases (41%)
- Dislocation of the needle (6 cases)
- Peripheral medical device > 48h (1)
- Paclitaxel >20h + peripheral administration (5)

The patient education, 6 cases (22%)
- 4 patients did not report their symptoms (pain,....)

The medical device, 2 cases (7%)
- Infuseur
- Venflon positional

Preventive actions taken
- Better way to fix the needle
- Improved patient education
- ...

Conclusions
The incidence of extravasation was low and within the range of 0.1 to 5% described in the literature.1,2 No tissue damage was noticed in any cases. The relevance of the study to clinical practice is to increase the awareness and involvement of the nursing team, and to avoid risk factors in order to increase the quality of care and the patient safety.

References

Design

Setting
Two thousand beds university hospital; Twelve thousand cytotoxic preparations each year.

Main outcome measures
Rates and causes of extravasation.

Figure 1. Occurrence of extravasation
82% occurred during the first or second cycle

Figure 2. Person who noticed extravasation first

Perspectives
- Fragile veins (9 cases)
- Surgery/biopsy (9 cases) and/or Radiotherapy (5)