

Introducing the Extravasation Guidelines: EONS Toolkit Post-Symposium Report



Introducing the Extravasation Guidelines

YVONNE WENGSTRÖM

New extravasation guidelines to provide advice to health care professionals on how to manage extravasation were recently launched at the 6th European Oncology Nurses Society (EONS) Spring Convention held in Geneva, Switzerland.

As EONS Past President, I was delighted to be part of the team involved in developing the new guidelines, and to chair the satellite symposium where they were officially launched. Developing and using guidelines are an extremely important part of providing the highest quality care to our patients. Through the process of development, involving the critical analysis of local protocols and policies, care pathways and quality evaluation, we can see why.

EONS convened a committee of independent nurses to develop a set of recommendations to assist the health care team in preventing, diagnosing and treating extravasations. Using their collective experience of developing and implementing guidelines, alongside expertise in initiating change, the aim was to provide guidance for use in routine practice and improve patient care.

Who has been involved? The Guidelines Committee



Yvonne Wengström
Immediate Past President of EONS and Professor of Cancer Care



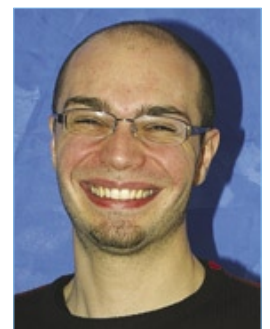
Jan Foubert
Senior Lecturer in Nursing and Midwifery, Executive Director of EONS



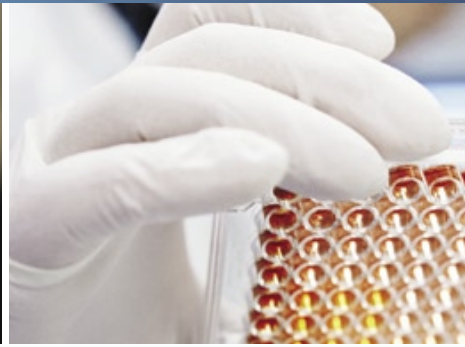
Anita Margulies
Clinical Nurse and Lecturer, Board member of EONS and the Swiss Oncology Nursing Society



Helen Roe
Consultant Cancer Nurse / Lead Chemotherapy Nurse, Board member of UKONS



Sebastien Bugeia
Oncology Nurse, Board member of the French Oncology Nursing Society



Extravasations: a shared responsibility between the specialist nurse and oncologist - Facts and figures about extravasations

ANITA MARGULIES

With over one million intravenous chemotherapy infusions and injections given worldwide everyday, health care professionals endeavour to minimise adverse events and complications for patients.

Nurses routinely administer intravenous cancer drugs and are closely involved in providing patients with information about medications and potential side effects. As well as this, their close involvement in administering chemotherapy means they are better skilled in phlebotomy techniques and proper cannulation. Playing this pivotal role in the administration of chemotherapy means that nurses are often better skilled in being able to prevent, recognise and manage an extravasation if it should occur.

Forming a treatment consensus within health care teams is vital and can be done by sharing knowledge and defining roles and responsibilities as a group, which will in turn avoid conflicting interventions and secure quality assurance.

The role of the health care team is to decide what immediate measures should be taken when an extravasation occurs and to inform the health care team of the subsequent treatment strategies. Ongoing team meetings provide an ideal forum to discuss cases, share experiences and develop standard operating procedures which can then be implemented when educating health care teams involved in the administration of parenteral cancer drugs.

Therefore, it is even more important to recognise that the new guidelines currently provide the best source of information for professionals. It is anticipated that these guidelines will encourage adoption of recommended procedures and the successful management of extravasation which will provide the patient with the safety they deserve.

In conclusion, the cancer care team face numerous challenges with respect to the parenteral administration of cancer drugs



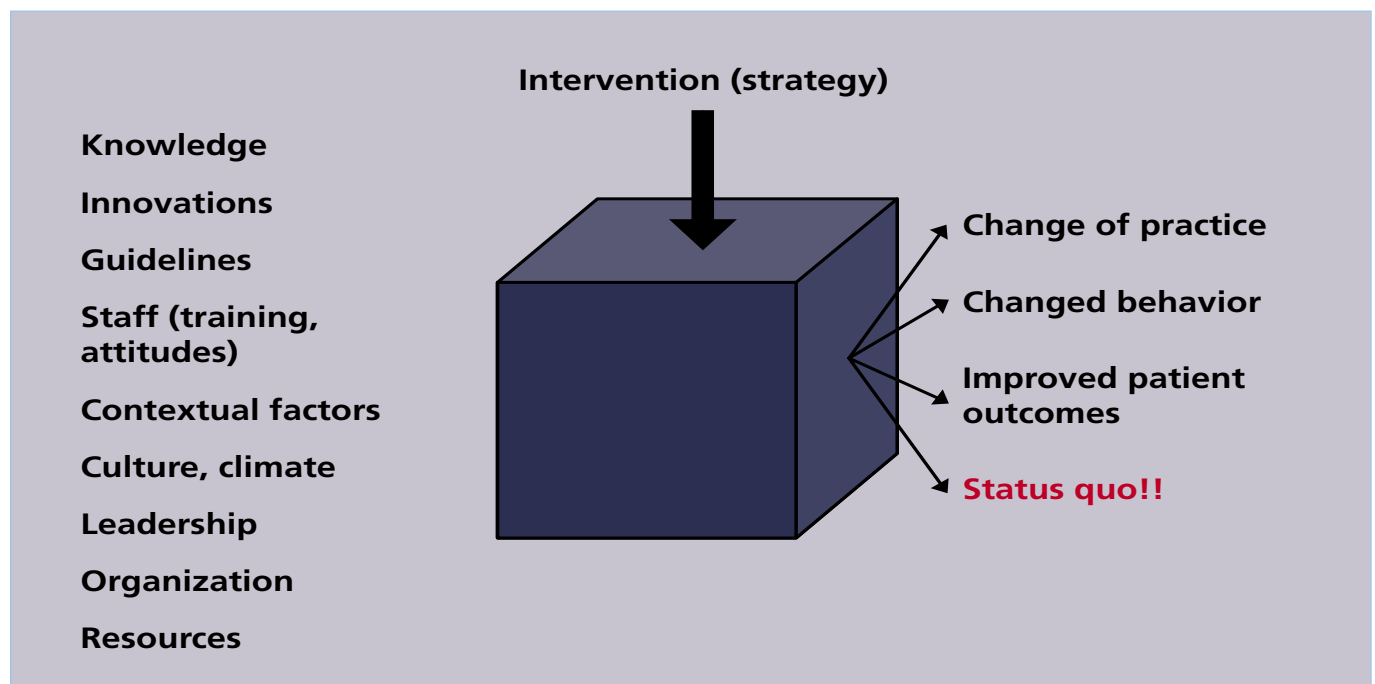
Sharing and implementing best practice – Content of the guidelines

YVONNE WENGSTRÖM

The overall goal of the new guidelines is to help nurses understand and recognise extravasation, as well as improve the prevention and overall management of extravasations in cancer patients.

Alongside these overall goals there are a number of further targets and aims linked to specific elements of extravasations, such as:

- Causes and risk factors
- Features and symptoms
- Differences versus flare and other reactions
- Implications of extravasation if left untreated
- Prevention measures
- The use of antidotes to counteract extravasation
- The nurses' role in extravasations



To explore some of the key elements of successful implementation in more detail, the PARIHS (Promoting Action on Research Implementation in Health Systems) model is especially relevant. For example, evidence should be well conducted and have a consensus about it and should include clinical experience verified through reflection, critique and debate.

Health care teams play a key role in implementation of guidelines.



The importance of using guidelines in clinical practice – Case study of anthracycline extravasations

HELEN ROE

Some professionals may consider anthracycline extravasations to be a rare but unfortunate consequence of administering chemotherapy, so why are guidelines so important?

Guidelines are essential to ensure safe practice, provide evidence based care and increase awareness amongst professionals enabling them to share experiences. Until recently, there has not

been any licensed treatment for dealing with anthracycline extravasations and teams have used a number of different non evidence based approaches.

Managing extravasations

Patient details: 47 year old woman with grade 3 breast tumour, had a mastectomy and axillary sampling, and was recommended to receive FEC100 (5-fluorouracil, Epirubicin and Cyclophosphamide). The anthracycline extravasation happened after cycle 4. The patient complained of some pain during the infusion and the nurse noticed a swelling near the cannula site. Initial management of the extravasation was performed locally and then the patient was referred to the regional Plastics Centre where the area was 'flushed'.

Consequences of treatment:

- Patient had to travel to regional plastics centre for surgery
- Invasive treatment
- Painful for the patient
- Increase risk of infection for chemotherapy treated patients
- Delay in receiving next cycle of chemotherapy
- Ongoing care needed



Two years on:

- Patient requires antibiotics post procedure
- Extravasation area remains visible
- Restricted hand movement
- Skin remains 'tight'
- Periodically experiences pain in the area
- Flare-ups occur
- Permanent reminder





Savene®: the only licensed antidote for anthracycline extravasation

More recently, a new treatment option specifically licensed for treating anthracycline extravasations has become available - the antidote Savene®. Clinical experience of the use of Savene® is described in the case study below:

Patient details: 29 year old woman, diagnosis of breast cancer, receiving Epirubicin. Extravasation occurred after cycle 5, with initial symptoms being swelling and redness.

Procedure:

- Infusion stopped and hospital extravasation guidelines followed
- Extravasation managed with Savene®
- Savene® administered once daily for three consecutive days (according to product licence)



Post treatment:

- 24 hours after treatment with Savene® symptoms were relieved
 - Symptoms did not reoccur
 - Patient could continue scheduled chemotherapy without delay



These case studies help to demonstrate that there are several important factors required in order to improve clinical practice, and ultimately the patient experience, including:

- Increasing awareness of extravasations amongst professionals
- Creating a standardised management pathway
- Clear guidance on the use of antidotes
- National (or European) audit



Anthracycline extravasations – doing the right thing

DR JAN BUTER

Anthracyclines are widely used in oncology treatment and indicated in areas including cancers of the blood (e.g. leukaemia), Hodgkin's disease, non-Hodgkin's lymphoma, small cell lung cancer and cancers of the breast, ovaries, stomach, bladder and bone. Anthracyclines are used as adjuvant, neo-adjuvant or palliative treatment and are usually scheduled every three to four weeks.

When an anthracycline extravasation occurs it can cause a number of symptoms, including pain, redness, swelling, infusion stop, blistering, ulceration and necrosis. Furthermore it can cause interruption and delay of primary chemotherapy treatment. The emotional stress experienced by the patient is also an important consequence of an extravasation and should not be forgotten.

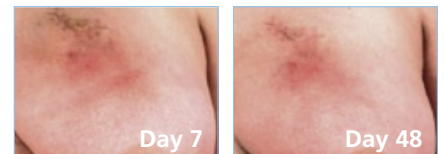
The optimal treatment of anthracycline extravasation has previously been controversial, with experimental

methods including cooling/heating, flushing and topical DMSO. Two recent multi-centre studies which investigated Savene® found it to be an effective acute treatment, which was well-tolerated in the patient population and worked in extravasations from both a peripheral line and central venous access.

Savene® has since become the only licensed treatment for anthracycline extravasation. Further evidence to support the efficacy of Savene® is highlighted below:

Patient #1

- Extravasation of 149 mg of doxorubicin
- Port-a-Cath
- Angiografi, UL
- Savene® in a three day schedule
- Indurations, dry skin after one week



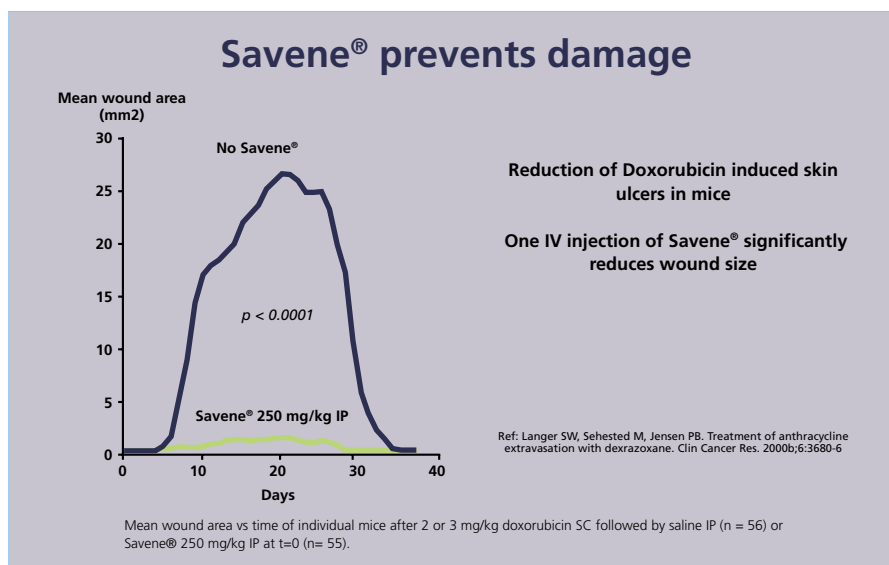
Photos: G. Giaccone 2000

The new guidelines are extremely useful to the health care professional thanks to their accessibility. They also highlight the importance of administration of extravasation antidotes by correctly trained personnel, with treatment according to the specific drug.

My call to action to colleagues would be the following:

- Be vigilant
- Be honest
- Be prepared and informed
- Be proactive

As such, the guidelines are the ideal tool to use to practice these actions, thereby managing an extravasation effectively and in the optimum way for both patient and health care professional.





Conclusions

YVONNE WENGSTRÖM

From the launch of the guidelines at EONS Spring Convention 2008, there are five major conclusions which the panel agreed should be the key points for using the guidelines and managing an extravasation:

- Nurses play a pivotal role in the management of chemotherapy and should be prepared and informed about the possibility of extravasations occurring
- Optimising patient comfort, safety and care should be the aim of all nurses involved in oncology
- Sharing responsibilities within teams is essential – it allows problems to be shared, quality assured and best practice to be followed
- Guidelines are a vital tool for the purpose of preventing and managing extravasations
- The antidote to treat anthracycline extravasations should be:
 - evidence based
 - supported by clinical trial data
 - proven
 - available in clinical practice

The guidelines committee welcome comments and feedback. For details of how to submit these, contact details are provided below. We look forward to hearing from you.

To obtain a copy of the Guidelines please visit:

<http://www.cancerworld.org/CancerWorld/getStaticModFile.aspx?id=1987>

For further information please contact:

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References

i European Oncology Nurses Society http://www.cancerworld.org/CancerWorld/moduleStaticPage.aspx?id=3891&id_sito=2&id_stato=1 [accessed March 2008]