POTASSIUM PERMANGANATE FOR USE AS TOPICAL SOAKS

University Hospitals of Leicester NHS
NHS Trust

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1. Key Words

Potassium permanganate

CONTACT AND REVIEW DETAILS	
Guideline Lead (Name and Title) Rahul Bhugra – Advanced Specialist Pharmacist Medication Safety	**Executive Lead** Medical Director
Details of Changes made during review: **January 2025** • Change in the name of Guideline Lead. Minor wording amendment within Section 2. Clinical content and final actions upon patient supply remain unchanged. • Change emeds to NerveCentre within Section 3.1 Point a) to accurately reflect the electronic prescribing system used. • Addition that potassium permanganate can be used within the vascular speciality in Section 3. Removal of tissue viability as speciality allowed to use potassium permanganate in Section 3 • Addition of URLs within supporting documents section.	

2. Introduction

Potassium permanganate is used as a dilute solution to treat weeping and blistering skin conditions, such as acute weeping / infected eczema and leg ulcers. It is supplied as a 'tablet' which requires dilution before use. The concentrated form if ingested is highly toxic; causing rapid swelling and bleeding of the lips and tongue, gross oropharyngeal oedema, local tissue necrosis, stridor and gastrointestinal ulceration. Ingestion can be fatal due to gastrointestinal haemorrhage, acute respiratory syndrome, hyperkalaemia, cardiac arrest and / or multi-organ failure. Even dilute solutions can be toxic if swallowed.

A patient safety alert - NatPSA/2022/003/NHSPS was issued by NHS England in April 2022 to prevent the above adverse effects from happening. This guideline has been produced in response to that alert.

3. Guideline Standards and Procedural

3.1 Prescribing:

As per decision by Therapeutic Advisory Service (TAS) that potassium permanganate solution is a RED preparation only to be prescribed by secondary care within Leicester Leicestershire & Rutland.

Prescribing must be by a specialist dermatologist, clinician working under the guidance of a dermatologist or a vascular surgeon / vascular clinician.

a) In patient prescribing:

A dose sentence has been set up on NerveCentre which must be used. This has instructions on the correct dilution for use as a Soak 0.01% topical solution These must not be amended.

b) Discharge or for Outpatient use:

If the patient is to have treatment within their home or external setting to UHL then a risk assessment **must** be carried out prior to use (see appendix).
The following must be assessed:

- The patient is able to self-manage, or the carer can undertake potassium permanganate soak
- The patient / carer can, and will store potassium permanganate 'tablets' safely in the home / setting, out of reach of children or vulnerable adults and separately to oral medication.
- The patient has the cognitive ability and visual acuity to self-manage and prepare the dilution, with no risk of inadvertent swallowing of potassium permanganate concentration by a patient, a family member or a regular visitor to the patient's home.
- The patient can dispose of the diluted solution safely and return any excess potassium permanganate 'tablets' to the hospital for safe disposal.

If the patient/carer can manage treatment and store safely:

- The patient and carer **MUST** receive all appropriate information – told how to use and prepare a dilute solution and should be given a leaflet with instructions.

If the patient cannot self-manage (or no carer), but can store safely:

- Hospital staff will need to liaise with community nursing colleagues to ensure continuity of treatment.

The patient and carer **MUST** receive all appropriate information.

If deemed unsafe to store:

- The patient MUST NOT be given a supply of potassium permanganate concentrate. A review should be undertaken by the prescriber to assess the need for initiating/continuing treatment.

For those patients who are going to a care home or other setting e.g. community hospital there must be communication with staff within that setting to ensure that the dilution and storage can be done safely. It should not automatically be sent until community hospitals have had a discussion and are happy to accept the risks.

The outcome of this risk assessment must be documented within the discharge letter / clinic letter.

All supplies must be dispensed by the hospital setting but only on confirmation that the risks have been accepted.

3.2 Preparation and use:

- Potassium permanganate ('tablets' and diluted solution) must NEVER be left unattended near a patient.
- Diluted solution should be prepared immediately away from the patient before use and disposed of immediately after each treatment.
- A soak is usually used for 10-15minutes at any one time.

3.3 Storage on wards & clinics

- Dermatology clinics and Ward 23 (Vascular) at Glenfield Hospital have potassium permanganate 'tablets' as stock. This stock must never be supplied directly to patients. A prescription must be written.
- Storage must be separate from any oral tablets and kept with external preparations in a locked cupboard.
- Supplies made for inpatients on wards will be supplied with the patient's name. They must not be kept within the patient's bedside locker or a drug trolley and kept with external preparations.

3.4 Dispensing

- Potassium permanganate ‘tablets’ must always be supplied for a named patient unless allowed as stock
- The original container must be used and never split.
- Once labelled and checked then it should be placed in a clear plastic bag and a sticker placed on the bag with a patient information leaflet

HARMFUL IF SWALLOWED

Patient information leaflet How to use Potassium Permanganate Solution Soaks

- For outpatient / discharge prescriptions only supplies to be made if there is clear documentation that a risk assessment has taken place (see 2.1 Point b)
- The duration treatment / stop date or review date must be clear within the letter
- The maximum amount to be issued for 1 patient is only 1 pot against any prescription. A second prescription will be required to continue treatment.

4. Education and Training

No formal education is required for this guideline

5. Monitoring Compliance

What will be measured to monitor compliance	How will compliance be monitored	Monitoring Lead	Frequency	Reporting arrangements
Datix incidents reported where the guideline has not be followed or has led to harm	Datix system	Medication Safety Pharmacist	Monthly	Medicines Optimisation Committee
Correct storage	Annual storage of medicines audit and spot checks by Medicines management team	Medication Safety Pharmacist	Annual	Medicines Optimisation Committee

6. Supporting Documents and Key References

- British Association of Dermatologists: How to use potassium permanganate solution soaks Published April 2022. Review Date April 2025. Available at: https://www.bad.org.uk/pils/potassium-permanganate-solution-soaks/ (Accessed 25 Nov. 2024)
- NHS England National Patient Safety Alert NatPSA /2022/003/NHSPS – Inadvertent oral administration of potassium permanganate. Issued April 2022. Available at: https://www.england.nhs.uk/publication/national-patient-safety-alert-inadvertent-oral-administration-of-potassium-permanganate/ (Accessed 25 Nov. 2024)

Appendix

Risk checklist to be completed prior to using Potassium Permanganate on discharge:

Patient addressograph

Is the patient able to self-manage, or will there be a carer who can undertake potassium permanganate soak?	Y / N (circle)
Will the patient / carer be able to store potassium permanganate 'tablets' safely in the home / setting, out of reach of children or vulnerable adults and separately to oral medication?	Y / N (circle)
Does the patient have the cognitive ability and visual acuity to self-manage and prepare the dilution, with no risk of inadvertent swallowing of potassium permanganate concentration by a patient, a family member or a regular visitor to the patient's home?	Y / N (circle)
Is the patient able to dispose of the diluted solution safely and return any excess potassium permanganate 'tablets' to the hospital for safe disposal?	Y / N (circle)

If any of the answers are NO please list the arrangements put in place to allow the potassium permanganate to be safely used at home.

If Yes to all – potassium permanganate may be supplied safely on discharge with appropriate counselling and patient information leaflets supplied

Risk assessment completed by :……..

Date : ……..