



Question: What is the guidance available for the use of adrenaline 'soaks' on wounds?

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Information

Adrenaline (epinephrine) solution for injection is not licensed for topical administration.¹ Nevertheless, reference sources advise that adrenaline solution can be applied topically to control superficial bleeding from arterioles or capillaries in the skin, mucous membranes, or other tissues.^{2,3,4,5} Bleeding from larger vessels is not controllable by topical application of adrenaline.² Note, the use of a filter needle should be considered when drawing up the contents of a glass ampoule.

Mechanism of action:

Adrenaline constricts arterioles and capillaries and causes blanching (a whitish discolouration of the skin) when applied locally to mucous membranes and exposed tissues.³

Strengths of adrenaline for topical use:

- The British National Formulary (BNF) advises that gauze soaked in adrenaline 1 in 1,000 (1mg/mL) can be applied to the affected area to manage capillary bleeding.⁵
- The Martindale advises that strengths up to 1 in 1,000 (1mg/mL) can be used

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topically.³

- The American Hospital Formulary Services (AHFS) advises that solutions containing adrenaline in concentrations of 0.002% (1:50,000) to 0.1% (1:1,000) may be sprayed or applied with cotton or gauze to the skin, mucous membranes or other tissues as a topical haemostatic.²
- The Palliative Care Formulary (PCF) advises that in the management of surface bleeding gauze soaked in adrenaline 1mg in 1mL (1 in 1,000) may be applied to the affected area with pressure for 10 minutes.^{4,6} However, due to the risk of ischaemic necrosis and rebound vasodilation only short-term use is advised.⁴
- In practice at OLH&CS adrenaline 1 in 1,000 ampoules are used for this indication.

References

- 1) Summary of Product Characteristics Adrenaline (Epinephrine) Injection 1:1,000 Solution for Injection. Available from www.hpra.ie. Accessed on the 05/07/2019.
- 2) Monograph Epinephrine. American Hospital Formulary Services. Available from www.medicinescomplete.com. Accessed on the 05/07/2019.
- 3) Monograph Adrenaline. Martindale: The complete drug reference. Available from www.medicinescomplete.com. Accessed on the 05/07/2019.
- 4) Monograph Haemostatics. Palliative Care Formulary. Available from www.medicinescomplete.com. Accessed on the 05/07/2019
- 5) Monograph Prescribing in Palliative Care. British National Formulary. Available from www.medicinescomplete.com. Accessed on the 05/07/2019.
- 6) Twycross R, Wilcock A and Toller CS. Symptom Management in Advanced Cancer. 4th Edition 2009. Pg 236.