



# 28TH CONGRESS OF THE EAHP THE TREATMENT OF PRESSURE ULCERS WITH BACTERIA BINDING MEDICATION AS A VALID THERAPEUTIC OPPORTUNITY

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## BACKGROUND AND IMPORTANCE

Pressure ulcers (PU), tissue lesion consequence of high or prolonged constant pressure over time, represents the third most costly disease to the health care system after cancer and cardiovascular diseases, causing over 60.000 deaths each year<sup>1</sup>.

The use, during the Sars-Cov-2 pandemic, of the bacteria binding medication (BBM) to reduce PU and possible infective complications, was the starting point that allowed the spread of BBM in many hospital departments, as a possible therapeutic alternative of iodoform gauze (IG). BBM, consisting of fabric saturated with dialkylcabamoylchloride (DACC), is able to capture bacteria and fungi thanks to a physical mechanism (hydrophobic interaction) instead of IG that control the wound microenvironment in the short term with a high risk of possible toxicity due to the systemic adsorption of iodine.

## AIM AND OBJECTIVES

In conjunction with the increased incidence of PU related to care services, the Hospital Pharmacy, assisted by wound care specialists (WCS), has monitored in the period from 2020 to 2023 the prescriptive appropriateness and the consumption of BBM in different departments in order to demonstrate the greater safety and effectiveness than the IG.

## MATERIAL AND METHODS

Since September 2020 the Hospital Pharmacy has selected some pilot wards in which a WCS operates, and subsequently equipped them with BBM. The single treatment cost was analyzed by comparing IG and BBM in terms of efficacy and effectiveness. After reviewing the excellent performance of the device in the first selected departments, the Pharmacy, the clinicians and WCS have collaborated to identify in which clinical situations it was possible to replace IG with BBM and when to prefer other therapeutic choices.

## RESULTS

The performed analysis showed that, in the single service, the cost of BBM is 3% higher than IG, but in prolonged treatment the use of BBM is advantageous. BBM, compared to IG, can be left in place for up to 7 days reducing care costs (MD and WCS service) and the frequency of wound manipulation, limiting clinical complications and eliminating the risk of systemic iodine absorption caused by the IG.



FIG.1 Pressure ulcer medicated with iodoform gauze (IG) in a patient at our clinic



FIG. 2 From left to right: pressure damage over the second toe, which has developed clinical infection; BBM swab wrapped around a toe ulcer; The same toe free from infection, and healing after 7 days of using BBM.

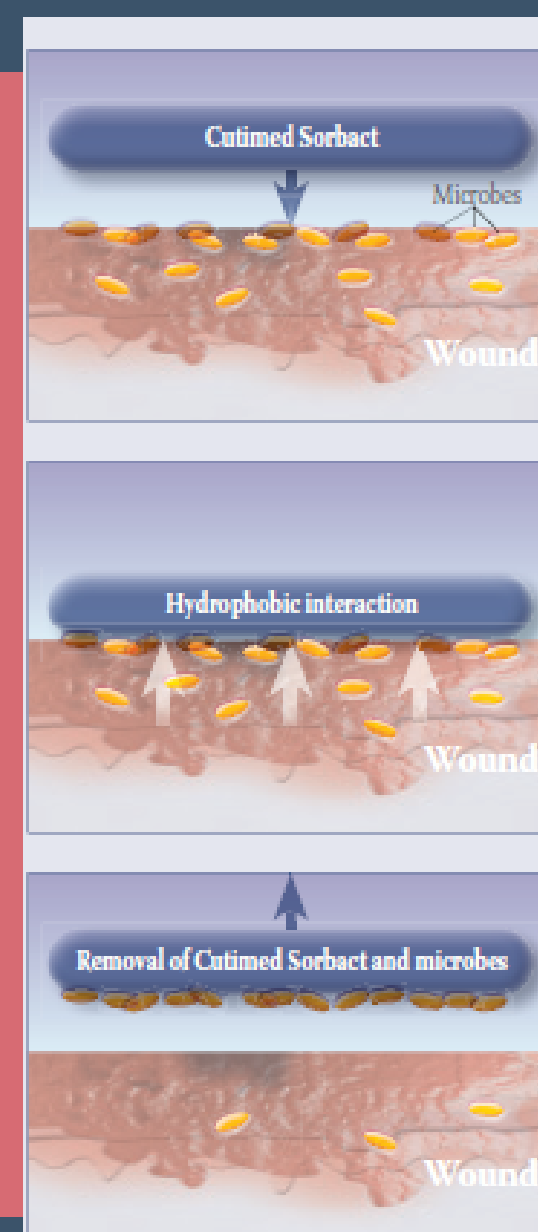


FIG. 3 Bacteria binding medication hydrophobic action on microbes

## CONCLUSION AND RELEVANCE

PU require long-term treatment: BBM represent a cost-effective solution and in view of the results obtained, the Pharmacy has decided to introduce definitively the BBM into the hospital formulary and to dismiss IG.

## REFERENCES

1. Afzali Borojeny L et al. Int J Prev Med. 2020 Oct 5;11:171.
2. Team V et al. Front Med (Lausanne). 2021 Jan 22;7:558696.

