

Pharmacoeconomics and wound care. When therapeutic appropriateness and cost savings move in the same direction

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ABSTRACT

Treatment of ulcers depends on the cause identified during diagnosis. Skin ulcers should be treated with antiseptic solutions, compression with an elastic bandage, use of healing and re-epithelialization ointments, photodynamic therapy, use of epithelial growth factors. In the year 2019, 121 patients were admitted to the Casavatore Hospice. All patients, upon admission, exhibited pressure ulcers (Ldp) in both stages I and II. A portion of the patients with stage II ulcers were treated with advanced dressings containing micronized silver (20 patients), resulting in a regression of the ulcer to stage I. Subsequently, they were treated with topical application of silver sul-fadiazine cream until complete healing of the lesion. Patients who did not have favorable indications for the application of such treatment were treated with Sofargen cream (60 patients), nonetheless preventing the worsening of the stage of the pressure ulcer. Patients with stage I ulcers (41 patients) were treated daily with silver sulfadiazine spray, which still contributed to the prevention of secondary lesions associated with immobility. The objective of managing pressure ulcers in bedridden or terminal patients has been fully achieved within dignified care times and, above all, with reduced company costs. As a final result, considering the current prices for both dressings and the specific drug, we achieved an economic savings exceeding 35%, highlighting how it is possible to implement, in various aspects and situations, important yet simple care approaches while respecting therapeutic appropriateness and patient compliance.

INTRODUCTION

This study, conducted at the Hospice “Il Polo del Sollievo” in Casavatore (NA), within the territory of the ASL Na 2 Nord, aims to highlight the use of drugs and dressings while respecting therapeutic appropriateness and the approach to wounds, and not least, achieving cost savings. Patients in the terminal phase of life or with bedridden syndrome often present skin problems that manifest with the appearance of pressure ulcers, which are difficult to resolve. Palliative treatment becomes a method capable of preventing various complications such as superinfection, unpleasant odor, and maceration from excessive exudate. The study’s objective is to evaluate the



Figure 1. Typical treatment.

correct management of lesions to achieve the best conditions, reducing care times and, above all, costs. Fundamental to this has been educational interventions on the proper use of a product based on micronized silver sulfadiazine, which, precisely because it often requires daily application, facilitates monitoring the correct evolution of the lesion.

MATERIALS AND METHODS

In the year 2019, 121 patients were admitted to the Hospice in Casavatore. All 121 patients were included in the study as they presented LDP (Localized Pressure Damage) of both Stage I and Stage II upon admission, and were divided into two groups based on the stage of the lesion.

The first group of patients (90) with Stage II lesions underwent treatment starting with cleaning using water and detergent, followed by irrigation with sterile saline solution under pressure, and finally treated with a uniform layer of 2/3 mm micronized silver sulfadiazine with a secondary non-woven fabric dressing. Dressing changes were daily during the acute phase and then every 48 hours.



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The dressing was continued until reaching regression to Stage I and subsequently until the remission of local signs of colonization, with monitoring of clinical signs of inflammation, pain, and lesion modification. At the time of admission, 18 out of the 90 patients in the first group presented necrosis. They were initially treated with hydrogels, and during dressing changes, underwent mechanical debridement to eliminate all necrotic material. Once a higher level of wound cleanliness was achieved, dressing was transitioned to silver sulfadiazine, utilizing a secondary dressing, either gauze or polyurethane foam, until complete healing of the lesion. Dressings for sacral LDP were changed after each evacuation.

The second group of patients (31) presented Stage I LDP. They were treated starting with cleaning using water and detergent, sterile saline solution under pressure, and finally treated with micronized silver sulfadiazine and a polyurethane secondary dressing. In this group, given the starting point, the healing times were significantly shorter.

RESULTS

Patients in the first group, on average, experienced estimated healing times for the lesion of approximately 45 days. The amount of exudate also varied depending on the choice of secondary dressing. In cases with higher exudate, the choice fell on polyurethane foam, transitioning from abundant to moderately serous exudate. Patients who had necrosis on the lesion upon arrival generally had longer

healing times, averaging around 15 days. In the second group of patients, healing times stabilized at approximately 35 days. One of the parameters that was managed well was certainly odor.

DISCUSSION

The objective of managing pressure ulcers in bedridden or terminal patients has been fully achieved within dignified care times and, above all, with reduced company costs. The molecule micronized silver sulfadiazine represents one of broad-spectrum chemotherapeutic antibiotic, crucial for preventing or eliminating infections in everyday situations, such as those studied.

The comparison with advanced dressings based on silver or specifically silver sulfadiazine is unfortunate both for the intrinsic characteristics of the two - drug vs dressing - and for the significantly lower cost ratio in favor of the pharmacological molecule. As a final result, the savings achievable were achieved by considering for each individual patient and average duration of treatment the total cost relating to the therapies in relation to the prices of the medications (€25.80 on average per medication), and of the specific drug (14.16 € on average per pack), we have achieved economic savings of more than 35%, highlighting how it is possible to implement, in various aspects and situations, important but simple healthcare approaches while respecting therapeutic appropriateness and patient compliance.

Patients	Medications	Days/Total Medications
31	18	35/558
Supposed Average Cost with Silver Sulfadiazine	Supposed Average Cost Wound Care with Silver Sulfadiazine	Supposed Average Cost with Advanced Dressing
€ 827	€ 1.395,00	€ 2.232,00

Table 1. *The economic saving, considering the current prices for both dressings and the specific drug*



Conflicts of Interest: The authors declare no conflict of interest.

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