

Clinical efficacy of a silver impregnated activated charcoal wound dressing

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INTRODUCTION

A number of open, multi-center, observational studies have been conducted by family physicians in Germany, in order to evaluate the efficacy and tolerability of a new silver impregnated activated charcoal (SIAC) dressing in the treatment of chronic wounds of varying etiologies. A pooled analysis has been performed in order to obtain a comprehensive overview of these studies¹.

TEST DRESSING

The SIAC dressing used in these studies was ACTISORB[®] Silver 220, manufactured by Johnson & Johnson Wound Management Worldwide, a division of ETHICON, INC and was used in accordance with the marketing authorization.

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METHODOLOGY

Four studies were conducted between 1996 and 1999. Patients were assessed at baseline and at the 6-week follow-up visit. Duration of treatment with the SIAC dressing was to be for 6 weeks, or until no longer required e.g. if wound healed. Data were pooled for analysis purposes. This was justified on the basis that all studies were designed with the same objective and that a standardized case report form was used.

Patients were included if they were suffering from chronic wounds (>4 weeks duration) and after assessment by their physician, were suitable to receive treatment with SIAC dressing as part of their normal care.

PATIENTS STUDIED

A total of 10,691 patients were included in the four studies between 1996 and 1999. The majority of wounds treated were leg ulcers (63%), followed by pressure ulcers (19.5%), diabetic foot ulcers (12%) and other wounds (5.5%) (figure 1). Leg ulcers were predominantly venous in origin, pressure ulcers were mainly Grade II, whilst the other wounds consisted largely of post-traumatic and post-operative wounds (figure 1).

Figure 1: Wound type

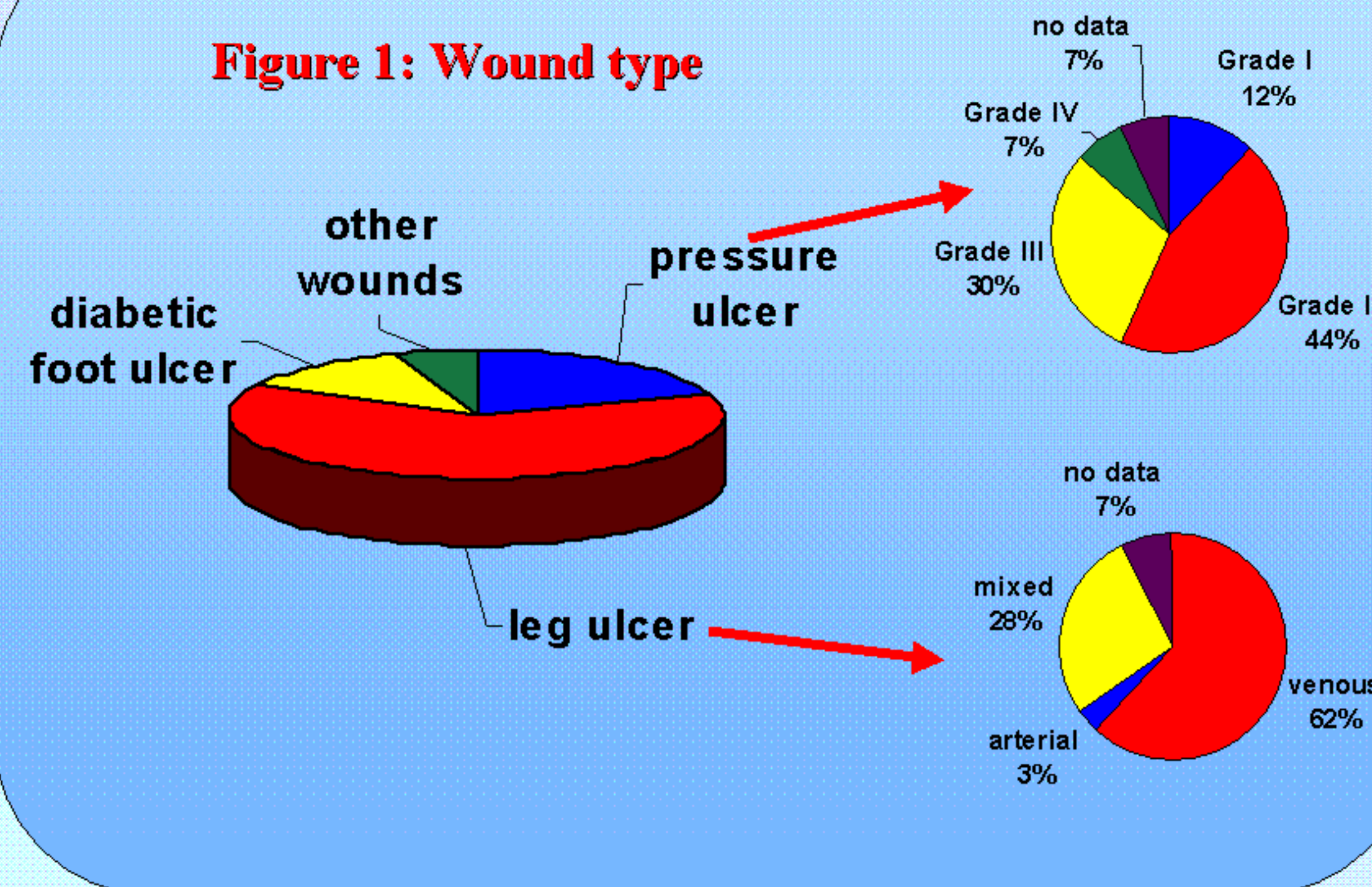


Figure 2: Overall % wound status at end of therapy/ 6 weeks (all wounds)

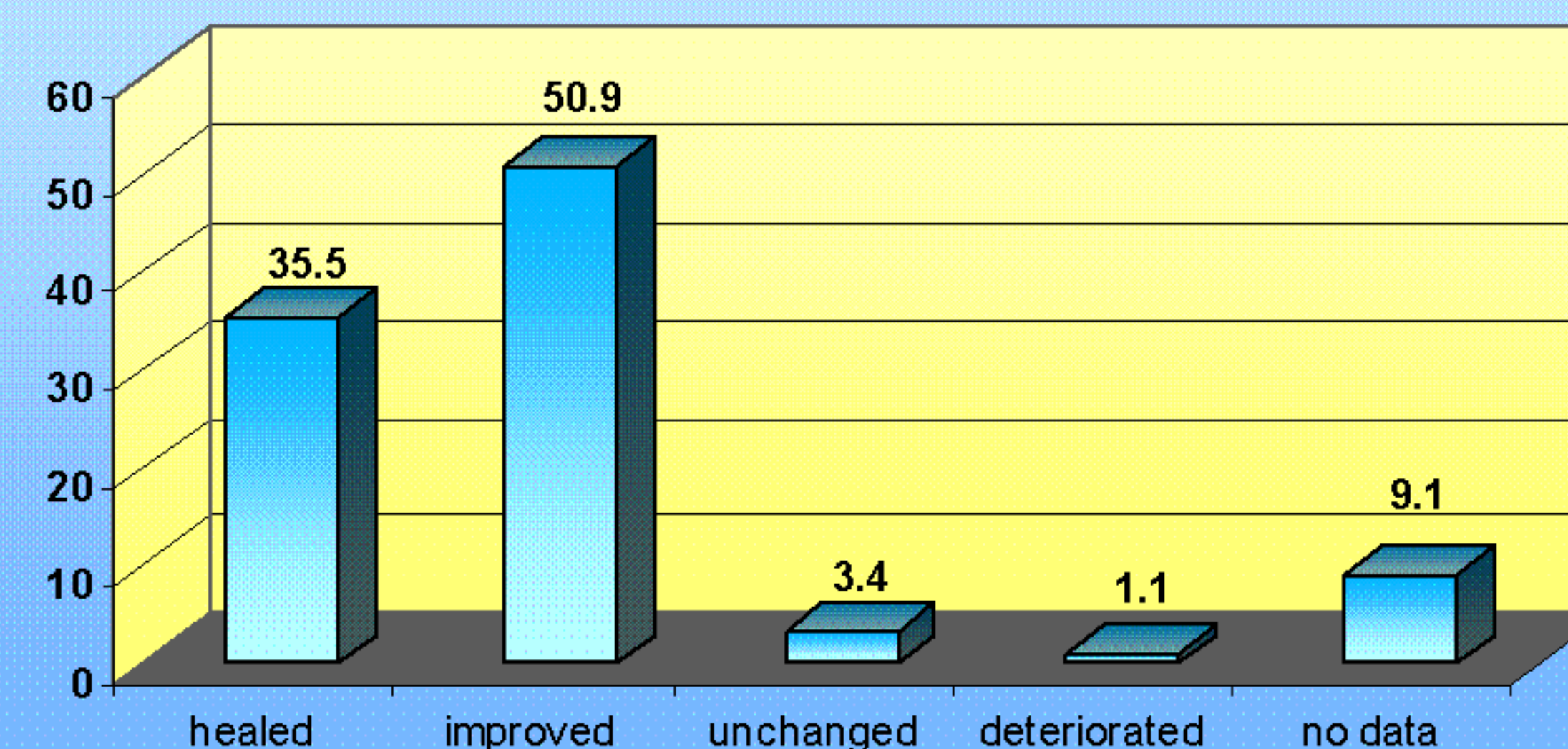


Figure 3: Signs of infection – change from baseline, all wounds

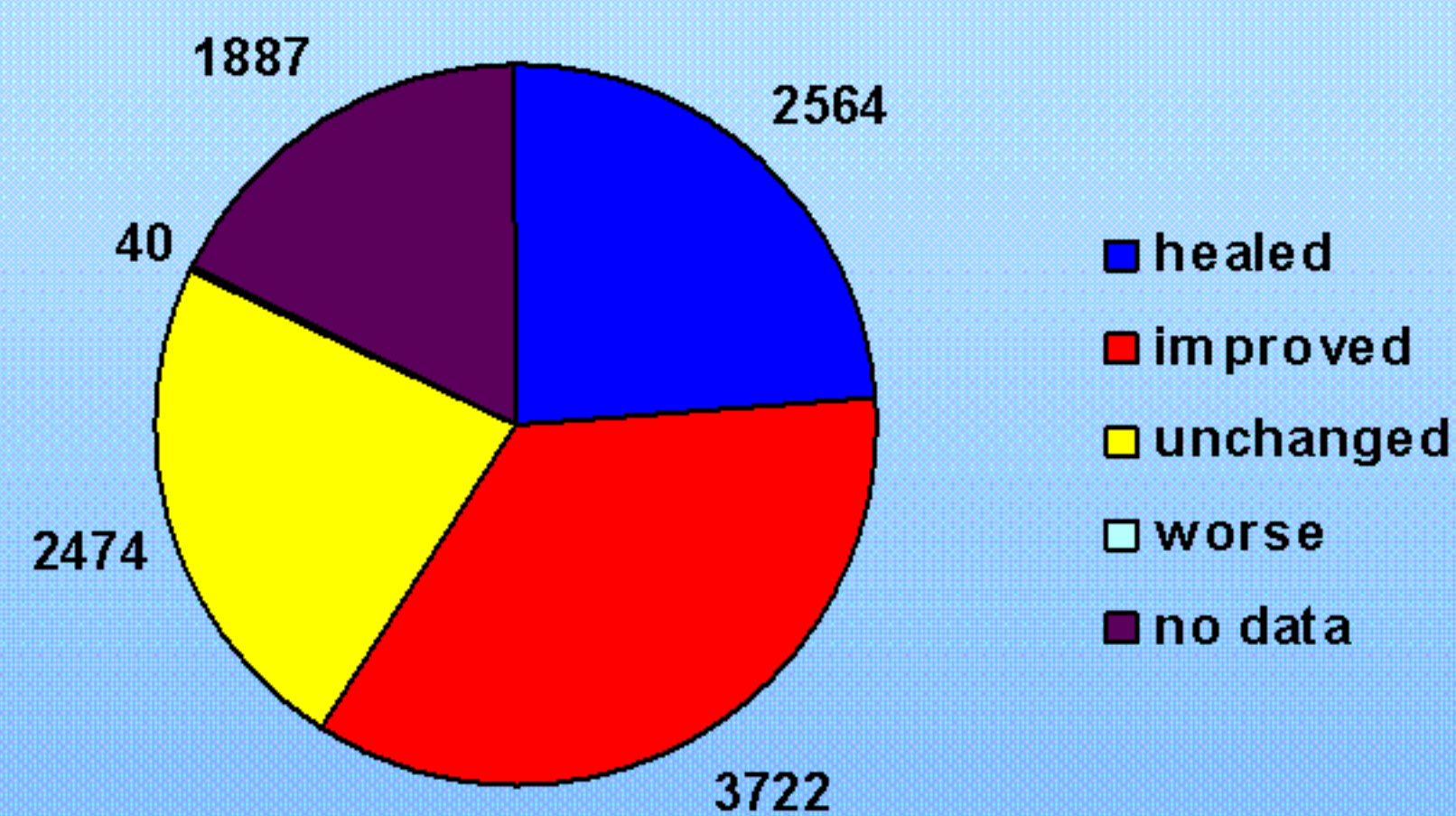
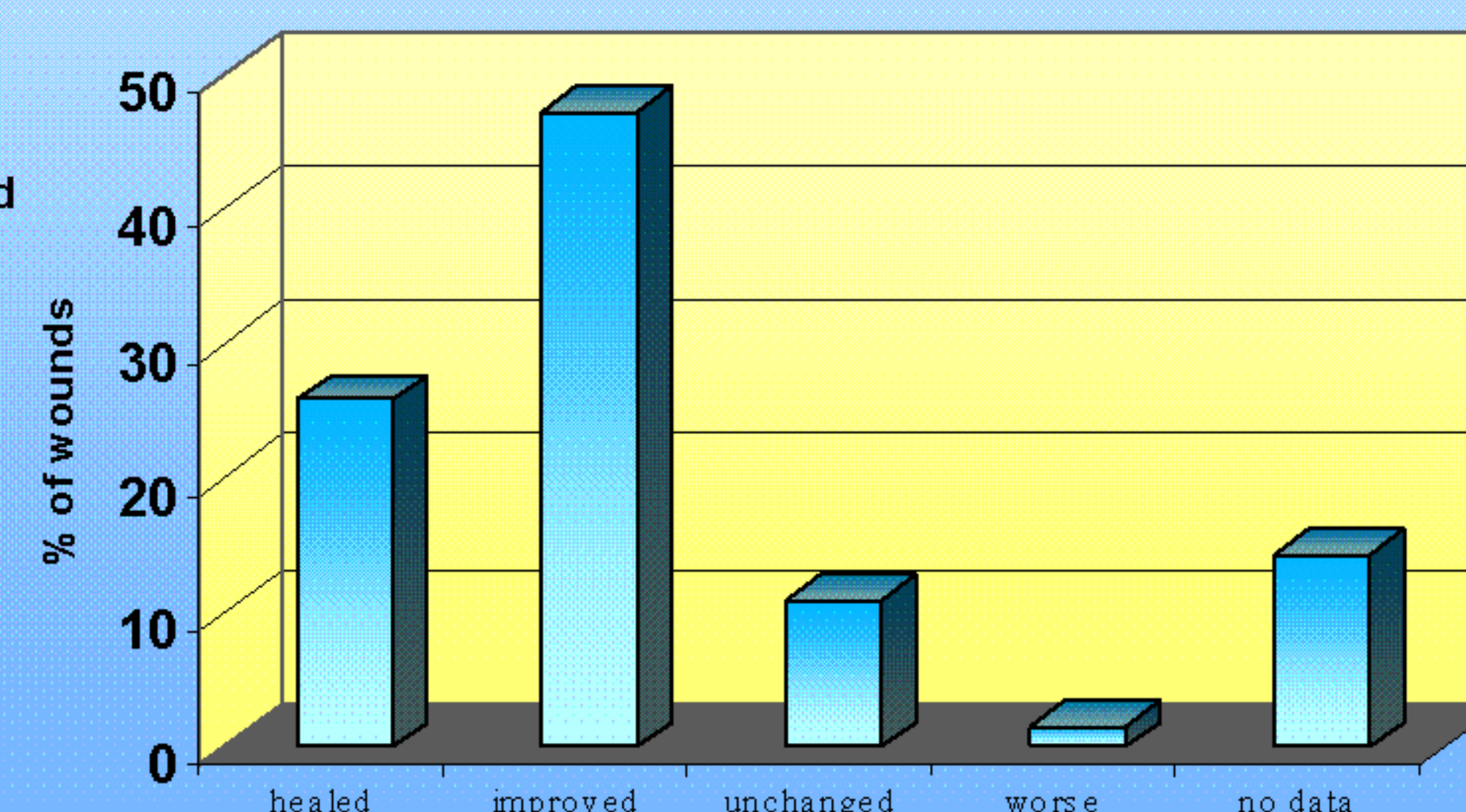


Figure 4: Exudation after 6 weeks SIAC treatment, all wounds



RESULTS

Based on the physicians' assessments, the pooled analysis shows that over 86% of wounds had improved by the end of therapy / 6-week period, including 35.5% healing completely (figure 2). The highest healing rate was in the other wounds category at 57.3%, with rates of 33.2%, 33.5% and 40.9% seen for leg ulcers, pressure ulcers and diabetic foot ulcers respectively.

For wound area, a mean percentage reduction of 72.1% (range 68.7% to 83.6%) from baseline was seen for all patients, that had wound measurement data, in these 6-week studies. Overall, greatest improvements were seen in all the smallest wounds i.e. those that had a baseline radius <2cm and in wounds found in the other wounds category.

Other evaluated parameters in the analysis, included the presence of signs of infection, odor and level of exudate. These were all shown to have improved following use of the SIAC dressing, compared to baseline:

- For signs of infection, 59% (6286/10687) of all wounds had either improved signs of infection or had healed by the end of treatment (figure 3). This figure increases to 71% (6286/8800) when wounds with no available data are removed from the analysis
- Only 0.4% (40/10687) of all wounds showed any worsening signs of infection following treatment (figure 3)
- A total of 72.5% (7753/10687) of cases had either improved odor or had healed (with no odor) by the end of treatment
- Only 1% (133/10687) of all wounds were noted as having worse wound odor following treatment
- For exudate, 73% (7825/10687) of all wounds had either improved exudate levels or had healed (with no exudate) by the end of treatment (figure 4). This figure increases to 85% (7825/9159) when wounds with no available data are removed from the analysis
- Of the wounds that had exudate levels recorded at the end of treatment, 81% (3420/4224) of these were in the low exudate category

For the overall assessment of tolerability of the SIAC dressing, the clinicians gave a rating of excellent or good in 95% (10,142/10,691) of cases.

CONCLUSION

The pooled results from these four observational studies involving 10,691 patients, demonstrates the clinical effectiveness of ACTISORB Silver 220 dressing in the treatment of chronic wounds of varying etiology and adds to the large clinical database being compiled on this wound dressing.

REFERENCE

¹Some of this data was included in an oral presentation at the 12th European Wound Management Association meeting, Granada, Spain, 2002. Presenter: Professor Rudolf Stadler from Klinikum Minden, Hautklinik, Portastraße 7-9, 32423 Minden, Germany.