Consensus Panel Recommendations for Chronic and Acute Wound Dressings

Michel Vaneau, PharmD; Guillaume Chaby, MD; Bernard Guillot, MD; Philippe Martel, MD; Patricia Senet, MD; Luc Téot, MD, PhD; Olivier Chosidow, MD, PhD

Objective: To seek a consensus on recommendations that would help health professionals choose appropriate wound dressings in daily practice, since a systematic review found only limited evidence to support reported indications for modern wound dressings.

Participants: A steering committee selected a panel of 27 experts with no declared conflicts of interest from lists of nursing staff and physicians (specialists or general practitioners) with long-standing experience of wound care. The lists were put forward by 15 French learned societies.

Evidence: The panelists received a recent systematic review of the literature, a classification of indications established by a working group, and definitions for the dressings.

Consensus Process: The steering committee designed questionnaires on chronic wounds and on acute wounds including burns for each of the 2 panels. The consensus method was derived from the nominal group technique adapted by RAND/UCLA. Panelists rated the relevance of each possible dressing-indication combination on the basis of the published evidence and their own experience. After the first round of rating, they met to discuss results and propose recommendations before taking part in a second round of rating. The working group peer reviewed the final recommendations.

Conclusions: A strong consensus was reached for use of the following combinations: for chronic wounds, (1) debridement stage, hydrogels; (2) granulation stage, foam and low-adherence dressings; and (3) epithelialization stage, hydrocolloid and low-adherence dressings; and for the epithelialization stage of acute wounds, low-adherence dressings. For specific situations, the following dressings were favored: for fragile skin, low-adherence dressings; for hemorrhagic wounds, alginates; and for malodorous wounds, activated charcoal.

Arch Dermatol. 2007;143(10):1291-1294

Published systematic reviews of the value of different types of dressing in the management of acute and chronic wounds provide only weak levels of evidence for their clinical efficacy. An updated systematic review by our team has confirmed the lack of high-evidence-level data (see companion article [Chaby et al]).

The best evidence in our review suggests that hydrocolloid dressings and alginate dressings are effective in the treatment of chronic wounds, and foam dressings and hydrofiber dressings are effective in the treatment of acute wounds, regardless of healing stage. Alginate dressings are for use at the debridement stage of chronic wounds. However, it was only for these 3 types of wound dressing that the evidence was good enough to reach a firm conclusion. Evidence is still scant for the relative efficacy of other types of dressing. This is why we decided to set up a formal consensus process to establish which dressings are most commonly accepted and recommended by physicians and nurses and to provide recommended indications for each type of dressing. Our assumption was that, depending on the kind of wound and the healing stage, it should be possible to provide appropriate, pragmatic criteria for choosing a particular dressing.

Participants

The consensus process (March-September 2006) was sponsored by Haute Autorité de Santé (HAS), the French National Authority for Health. In 2004, the sponsor nominated the chairman of a working group (O.C.), who selected, together with
the sponsor, 20 working group members (pharmacists, dermatologists, and other physicians specializing in wound care), who were to perform and discuss a systematic review of the literature on dressings for wound care. Because this review found only limited evidence to support the proposed indications for wound dressings (see Chaby et al4), the decision was taken to carry out a formal consensus process. It was set up and run by a steering committee of 7 members (the authors of the present article) chosen by the chairman (O.C.) from among the working group members. To select consensus panel participants, the steering committee asked 15 learned societies to each submit a list of 4 to 6 experts (nursing staff and physicians and either specialists or general practitioners) with experience in wound care. Fourteen societies responded (available in an eTable [http://www.archdermatol.com]) and proposed the names of 78 experts. The steering committee ranked these experts on the basis of their suitability for inclusion in 1 of 2 panels (one on chronic wounds and the other on acute wounds). If there was no expert with the required experience in a specific field, the steering committee consulted lists of experts with similar experience maintained by HAS. Written declarations of interest were obtained by HAS from all participants. Experts declaring any permanent link with industry, ongoing clinical work sponsored by industry, or who were not available for the panel meeting were excluded. At the end of the selection process, 14 experts were assigned to the chronic wounds panel and 13 to the acute wounds panel.

EVIDENCE

Evidence for the relative efficiency of dressings was from a systematic review of the literature conducted by the second author (G.C., see Chaby et al4).

CONSENSUS PROCESS

We used a consensus method adapted from the RAND/UCLA nominal group technique method (Figure 1).5,6 The steering committee designed 2 questionnaires (222 items for the chronic wound questionnaire and 263 for the acute wound questionnaire) and wrote the instructions for completing them. Apart from the relevant questionnaires, the expert panelists received a report describing the findings of the systematic review, a classification of indications established by the working group, and a list of the different types of dressing under consideration with explanatory comments (Figure 2). In the questionnaires, indications were listed from the most specific to the least specific (eg, infected before unspecified chronic wounds) so that panelists would not be tempted to provide answers relating to specific situations to questions that were of a more general nature. The questionnaire did not address dressing selection in relation to the amount of exudates or wound area because these factors are highly dependent on the stage of healing and/or vary considerably over time. Panelists could choose any dressing appropriate for a particular wound stage (eg, absorbent foam dressings).

Panelists were asked to rank the dressings that were “most often useful” in any given indication first, followed by the dressings that “may be used in some cases.” They had to rate the dressing in the light of clinical efficiency as given by the available evidence and their own experience on a scale from 1 (totally inappropriate) to 9 (totally appropriate). A rating of 5 reflected indecision. In addition, they had to answer general questions on usefulness criteria in selecting dressings. We made every effort to retrieve any missing ratings.

The panelists met between the 2 rounds of the consensus process. They were informed of the results of the first round, commented on their own ratings, and suggested amendments to the questionnaires. If the ratings for a given question were in the 1 to 3 range or in the 7 to 9 range, and there were no missing ratings, this was considered to be a sign of strong disagreement or of strong agreement. These proposals were not reassessed in the
second round. For all the other proposals, the steering committee used all the information from the first round and from the between-round discussion to design a second set of questionnaires for submission to the panelists in the second round (196 items for chronic wounds and 255 items for acute wounds). We applied the same decision rules in the second round, after deleting the highest and the lowest ratings (whenever there were no missing data), to discard incongruent responses.

The questionnaires for the first round were sent out on June 1, 2006, and for the second round, on July 11, 2006. All panelists completed both rounds (1 first-round questionnaire was retrieved after the panel meeting). The acute wounds panel meeting (June 19, 2006) was attended by 12 of 13 panelists, and the chronic wounds panel meeting (June 26, 2006), by 12 of 14 panelists. Data retrieval was complete on September 20, 2006. All panelists completed both rounds (1 first-round questionnaire was retrieved after the panel meeting). The acute wounds panel meeting (June 19, 2006) was attended by 12 of 13 panelists, and the chronic wounds panel meeting (June 26, 2006), by 12 of 14 panelists. Data retrieval was complete on September 20, 2006. Results are given in Table 1. There was no agreement in the second round on any of the proposals with missing responses. However, even if the missing rating had always been a maximum of 9, none of these proposals would have fallen in the strong agreement category. The steering group only reported proposals on which there was strong or relatively strong agreement in favor of a given indication-dressing combination to the working group, which met on September 27, 2006, to review and approve the final consensus statements.

CONCLUSIONS

The consensus statements on which there was strong agreement on the “most often useful” dressing type for a given indication are summarized in Table 2. The most suitable dressings for chronic wounds were considered to be hydrogel dressings at the debridement stage, foam and low-adherent dressings at the granulation stage, and hydrocolloid and low-adherent dressings at the epithelialization stage (see dressing definitions in Figure 2). Low-adherent dressings were favored at the epithelialization stage of acute wounds. Certain dressings were appropriate for specific situations: low-adherent dressings for fragile skin, alginates for hemorrhagic wounds, and activated charcoal for malodorous wounds. The amount of wound exudates was not investigated. However, both panels agreed that the following criteria were useful when choosing a dressing: pain on application and removal, management of exudates, and dressing tolerance.

Interestingly, the consensus statements giving rise to strong agreement did not confirm the highest level (level B) evidence from the literature, \(^6,^10\) maybe because the indications defined in published clinical trials are only of limited relevance to real-life situations in which considerations such as the stage of the healing process or the specific nature of the case (eg, hemorrhagic or malodorous wounds) tend to prevail. There was no evidence nor consensus for claims that certain dressings (eg, silver-containing antibacterial dress-
ings) are best suited to specified indications, such as care of infected wounds or prevention of infection. Nor was any consensus reached on classic paraffin gauzes despite their widespread use. Paradoxically, many panelists used paraffin gauzes, often combined with other topical agents, either in their routine daily practice or in specialized treatment protocols (eg, specific surgical procedures or care of extensive burns), even though they could not come to any agreement on their clinical value. Cost may be a factor to be taken into consideration here. Our questionnaires did not address highly specialized treatment protocols. Exploring such indications would require more detailed descriptions of wounds that include a consideration of their cause and healing stage and would need the contribution of experts in wound etiology.

Accepted for Publication: June 14, 2007.
Correspondence: Olivier Chosidow, MD, PhD, Department of Dermatology and Allergy, Hôpital Tenon, 4 rue de la Chine, 75970 Paris, CEDEX 20, France (olivier.chosidow@man.aphp.fr).

Author Contributions: Study concept and design: Vaneau, Senet, Téot, and Chosidow. Acquisition of data: Vaneau, Guillot, Martel, and Chosidow. Analysis and interpretation of data: Vaneau, Chaby, Guillot, Martel, Senet, and Chosidow. Drafting of the manuscript: Vaneau. Critical revision of the manuscript for important intellectual content: Chaby, Guillot, Martel, Senet, Téot, and Chosidow. Statistical analysis: Martel. Obtained funding: Vaneau. Administrative, technical, and material support: Vaneau and Martel. Study supervision: Vaneau, Guillot, Senet, and Chosidow.

Financial Disclosure: Drs Chosidow and Senet are presently involved in building a protocol using Dermagen, a dermal substitute (a cell therapy product) in diabetic foot ulcers. Dermagen is developed by Genverrier (Sophia Antipolis, France), which also sells hyaluronic acid–associated dressings. Dr Téot is involved in the following collaborations and partnerships: scientific collaboration on wound dressings with Braun (randomized trial on Calgitrol [a silver alginate wound dressing] [ Magnus Bio-Medical Technologies] vs alginate in infected wounds) and Kinetic Concepts Inc (KCI) (and the French Ministry of Health) on a medical-economic study of the effects of vacuum-assisted closure (KCI); editorial collaboration with Molnlycke Products (pain and dressing changes for acute wounds), KCl (on technical considerations on vacuum-assisted closure [World Union of Wound Healing Societies statement]), and Coloplast (on pain management of wounds); and educational partnerships with Smith & Nephew, Johnson & Johnson, and Urgo.

Additional Information: The eTable is available at http://www.archdermatol.com.

Additional Contributions: The authors were all members of the steering committee. The working group who participated in peer reviewing the consensus statements included Helene Bachelet, pharmacist, Lille; Hervé Carlin, burns specialist, Clamart; Clélia Debure, dermatologist, Paris; Catherine Denis, endocrinologist and gynecologist, Saint Denis; Anne Dompmartin, dermatologist, Caen; Serge Grau-Ortiz, general practitioner, Auterive; Jean-Claude Guillaume, dermatologist, Colmar; Véronique Matz, pharmacist, Bar-le-Duc; Sylvie Meaume, geriatrician, Ivry sur Seine; Jean-Louis Richard, diabetologist, Le Grau du Roi; Jean-Michel Rochet, specialist in physical and rehabilitation medicine, Coubert; Nathalie Sales-Ausias, pharmacist, Marseille; and Anne Zagnoli, dermatologist, Brest, France. The members of the chronic wounds expert panel included Francis Ane, general practitioner, Montpellier; Hermine Arzt, specialist in physical and rehabilitation medicine, Amiens; Sophie Beyrand, nurse, Panazol; Sophie Blaise, dermatologist and specialist in vascular medicine, Grenoble; Maxime Chahim, phlebologist and angiologist, Paris; Catherine Gilbert, nurse, Paris; Georges Ha Van, specialist in physical and rehabilitation medicine, Paris; Chantal Le Goff, nursing manager (geriatrics), Le Mans; Laurent Machet, dermatologist, Tours; Philippe Nicolini, vascular surgeon, Lyon; Vincent Ould-Aoudia, geriatrician, Nantes; Nathalie Salles, geriatrician, Pessac; François Truchetet, dermatologist, Thionville; and Loïc Vaillant, dermatologist and lymphologist, Tours, France. The members of the acute wounds expert panel included Serge Baux, burns specialist, Paris; Françoise Blech, hygiene specialist, Nancy; Fabienne Braye, burns specialist, Lyon; José Clavero, general practitioner, Paris; Nadine Favier, nurse, Montpellier; Ciprien Isacu, burns specialist, Bordeaux; Eric Jehle, emergency physician, Clermont-Ferrand; Laurent Lantieri, specialist in plastic and reconstructive surgery, Créteil; Jean-Louis Lorin, gastrointestinal surgeon, Bourg-de-Péage; Denis Pouchain, general practitioner, Vincennes; Michel Scepi, emergency physician, Poitiers; Claude Soulieri, nurse, Nimes; and Jean-Paul Viand, general practitioner, Paris; France. Frédéric De Bels, pharmacist, Haute Autorité de Santé, Saint Denis, France, contributed to the design of the consensus process and questionnaires.

REFERENCES

<table>
<thead>
<tr>
<th>Expertise</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angiology</td>
<td>Société Française d’Angiologie (SFA)</td>
</tr>
<tr>
<td>Burns</td>
<td>Société Française d’Etude et de Traitement de la Brûlure (SFETB)</td>
</tr>
<tr>
<td>Dermatology</td>
<td>Société Française de Dermatologie (SFD)</td>
</tr>
<tr>
<td>General practice</td>
<td>Société Française de Médecine Générale (SFMG)</td>
</tr>
<tr>
<td>Gerontology</td>
<td>Société Française de Gériatrie et de Gériologie (SFGG)</td>
</tr>
<tr>
<td>Lymphology</td>
<td>Société Française de Lymphologie (SFL)</td>
</tr>
<tr>
<td>Nursing</td>
<td>Fédération Nationale des Infirmiers (FNI)</td>
</tr>
<tr>
<td>Physical and rehabilitation medicine</td>
<td>Société Française de Médecine Physique et de Réadaptation (SFMPR)</td>
</tr>
<tr>
<td>Phlebology</td>
<td>Société Française de Phlébologie (SFP)</td>
</tr>
<tr>
<td>Vascular surgery</td>
<td>Société de Chirurgie Vasculaire de Langue Française (SCVLF);</td>
</tr>
<tr>
<td></td>
<td>Société Française de Médecine Vasculaire (SFMV)</td>
</tr>
<tr>
<td>Wound care</td>
<td>Société Française et Francophone des Plaies et Cicatrisations (SFFPC)</td>
</tr>
<tr>
<td>Hygiene</td>
<td>Société Française d’Hygiène Hospitalière (SFHH)</td>
</tr>
<tr>
<td>Emergency medicine</td>
<td>Société Francophone de Médecine d’Urgence (SFMU)</td>
</tr>
</tbody>
</table>