

Scoring of risk wounds by using a new assessment tool: The Wounds at Risk (W.A.R.) Score checklist

O. Assadian^a, J. Dissemond^b, V. Gerber^c, A. Kingsley^d, A. Kramer^e, D.J. Leaper^f, G. Mosti^g, G. Riepe^h, A. Risseⁱ, M. Romanelli^j, R. Strohal^k, J. Traber^l, A. Vassel-Biergans^m, T. Wildⁿ, T. Eberleinⁿ

^a Medical University of Vienna, Clinical Institute for Hygiene and Medical Microbiology, Vienna General Hospital, Vienna, Austria, and ^b Universitätsklinikum Essen, Essen, Germany, and ^c Schulung und Beratung im Wundmanagement, Spelle, Germany, and ^d Clinical Manager Infection Control and Tissue Viability, Northern Devon Healthcare Trust, North Devon District Hospital, Barnstable, Devon, UK, and ^e Ernst-Moritz-Arndt-Universität, Institut für Hygiene und Umweltmedizin, Greifswald, Germany, and ^f Department of Wound Healing, Cardiff University, Heath Park, Cardiff, UK, and ^g Clinica M.D. Barbantini, Lucca, Italy, and ^h Stiftungsklinikum Mittelrhein, Akademisches Lehrkrankenhaus Johannes-Gutenberg-Universität, Mainz, Gesundheitszentrum Ev. Stift Sankt Martin Koblenz gGmbH, Koblenz, Germany, and ⁱ Abteilung für Angiologie, Diabetologie, Immunologie, Medizinische Klinik Nord, Klinikum Dortmund gGmbH, Dortmund, Germany, and ^j Wound Healing Research Unit, Department of Dermatology, University of Pisa, Pisa, Italy, and ^k Abteilung Dermatologie, Landeskrankenhaus Feldkirch, Akademisches Lehrkrankenhaus, Feldkirch, Austria, and ^l Venenambulanz Kreuzlingen, Kreuzlingen, Switzerland, and ^m Zentralapotheke Klinikum Stuttgart, Katharinenhospital Diakonie-Klinikum Stuttgart, Med. Klinik I, Stuttgart, Germany, and ⁿ College of Medicine and Medical Sciences, Arabian Gulf University, Manama, Kingdom of Bahrain

Introduction

To date there is no generally accepted definition of risk wounds that is defined synonymously also as wounds at risk or wounds at risk of infection.

Because of the lack of a clear definition many wounds are classified as being “potentially at risk of infection”.

Therefore the excessive use (concerning frequency and duration) of topical, antiseptically-efficacious products is often the expression of a non-evidence-based empirical safety consciousness. On the other hand, it is important to identify at-risk patient groups or critical wound conditions, in order to prevent serious infections by consistency in wound management practices.

In order to achieve improved risk assessment of wounds at risk of infection a risk score (W.A.R. Score) has been introduced. This should make the classification of wounds at risk more simple with an appropriate with a general treatment regimen.

Material and Methods

The expert recommendation for wounds at risk, published in 2011 [1,2] represents aims to contribute to the clarification of the term risk wound and to provide an aid in the decision process as to which situations justify the use of antiseptics as a therapeutic measure for preventing wound infections. Since evidence-based guidelines regarding this topic are mostly missing, this recommendation reflects the consensus of an interdisciplinary and inter-professional expert group in the assessment of the current medical state-of-knowledge and their own clinical experience. By using a new assessment tool (“W.A.R. Score checklist”), also presented here, an instrument for a systematic survey of individual risk situation of a patient is now available.

Results and Discussion


The creation of a checklist in the form of a score for risk wounds serves the objective of enabling a clinically oriented reasoned risk assessment using concrete patient circumstances. This system is presented in Figure 1. The indication for use of antiseptics in such wounds is the result of the addition of differently weighted risk causes, for which points are assigned. Antimicrobial treatment is justified in the case of three or more points.

The W.A.R. score is helpful for optimising risk evaluation of the wound at risk of infection. This makes it possible to maintain a summarisable requirement-oriented selection of methods available in the clinical routine, and to adequately care for every wound after assessment of the concrete risk situation.

References

[1] Dissemond J, Assadian O, Gerber V, Kingsley A, Kramer A, Leaper DJ, Mosti G, Piatkowski de Grzymala A, Riepe G, Risse A, Romanelli M, Strohal R, Traber J, Vassel-Biergans A, Wild T, T. Eberlein T (2011): Classification of wounds at risk (W.A.R. score) and their antimicrobial treatment with polihexanide – a practice-oriented expert recommendation. *Skin Pharm Physiol* 24/5. doi:10.1159/000327210

[2] Dissemond J, Assadian O, Gerber V, Kingsley A, Kramer A, Leaper DJ, Mosti G, Piatkowski de Grzymala A, Riepe G, Risse A, Romanelli M, Strohal R, Traber J, Vassel-Biergans A, Wild T, T. Eberlein T (2011): Einstufung von Risikowunden (Wounds at Risk; W.A.R. Score) und deren antimikrobielle Behandlung mit Polihexanid – eine praxisorientierte Expertenempfehlung. *Wundmanagement* (2011) 5 (2): 76-85



Wounds-At-Risk (W.A.R.) Scoring System

The W.A.R. score is based on a clinically oriented risk assessment using concrete patient circumstances. It is a tool to optimize the wound treatment regime. The indication for the use of antiseptics results from the addition of differently weighted risk causes, for which points are assigned. Antimicrobial treatment is justified if there are 3 or more points.

How to calculate the W.A.R. Score

Score every risk definition below (only if it applies to the patient) with ① ② or ③ risk points, as shown. (multiple responses are possible). Then add all the risk factor points to obtain the total W.A.R. Score.

① risk point each	
Acquired immunosuppressive disease (e.g. diabetes mellitus)	<input type="checkbox"/>
Systemic haematological disease	<input type="checkbox"/>
Solid tumour disease	<input type="checkbox"/>
Acquired immune defect due to medical therapy such as cyclosporine, methotrexate, glucocorticoids or antibodies	<input type="checkbox"/>
Postsurgical wound healing disorder, which results in (unplanned) secondary healing	<input type="checkbox"/>
Problematic hygienic conditions related to social or occupational environment (e.g. agriculture, lorry driving)	<input type="checkbox"/>
Potentially heavily contaminated wounds (e.g. perineum, genitals)	<input type="checkbox"/>
Patient age >80 years	<input type="checkbox"/>
Young age of patient (premature infants, babies, infants)	<input type="checkbox"/>
Wounds persisting for >1 year	<input type="checkbox"/>
Wound dimensions of >10 cm ²	<input type="checkbox"/>
Chronic wounds of any aetiology having a depth of >1.5 cm	<input type="checkbox"/>
Extended inpatient status >3 weeks	<input type="checkbox"/>
② risk points each	
Severe acquired immune defects (e.g. HIV infection)	<input type="checkbox"/>
Heavily contaminated acute wounds	<input type="checkbox"/>
Bite, stab and gunshot wounds penetrating 1.5-3.5 cm	<input type="checkbox"/>
③ risk points each	
Burn wounds with involvement of >15% Body Surface Area (BSA)	<input type="checkbox"/>
Severe congenital immune defects such as agammaglobulinaemia, severe combined immune defects	<input type="checkbox"/>
Wounds that have a direct connection to organs or functional structures (e.g. including joints) or which contain foreign material	<input type="checkbox"/>
Bite, stab and gunshot wounds penetrating >3.5 cm	<input type="checkbox"/>

W.A.R. Score
(add all the risk points)

Patient details:

Name _____

Initials _____

Year of birth _____

Gender _____

Expert details:

Name _____

Function _____

Address _____

Date _____

Interpreting the results:

A score ≥ 3 points indicates the presence of a wound clinically at risk of infection and consequently represents a clinical indication for the antimicrobial treatment (e.g. with PHMB).

Antimicrobial treatment is obligatory when:

Elimination of pathogens when multiple resistant pathogens are present (specified by Robert Koch Institute).

Critically colonized wounds are present.

Treatment Recommendation:

antimicrobial treatment with e.g. PHMB (more than/equal to 3 risk points)

no antimicrobial treatment necessary (less than 3 risk points)

Fig.1: The W.A.R. Score assessment tool