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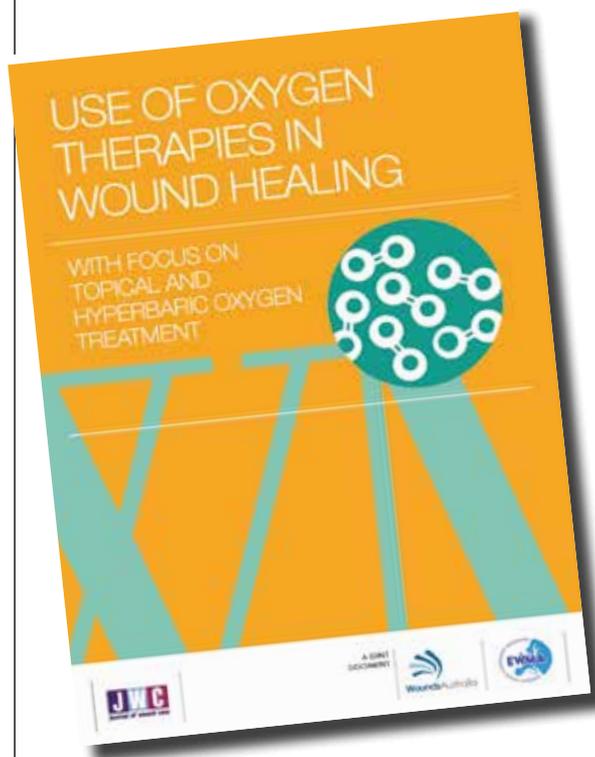
The document is
supported by an
unrestricted educational
grant from: ActiMaris,
AOTI, Inotec AMD, Oxy-
Care and SastoMed.

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New EWMA document:

Use of oxygen therapies in wound healing: Focus on topical and hyperbaric oxygen treatment

In 2015 EWMA decided to prepare the elaboration of a document about the use of oxygen in wound healing. Although oxygen is one of the essential components in terms of the healing of wounds the EWMA Council at that time considered that the topic was not very comprehensively covered in the existing literature. This short article introduces the full document which will be available for free online download from May 2017.



INTRODUCTION TO THE DOCUMENT

Wounds require, amongst other things, restoration of macro- and microcirculation as essential conditions for healing. The main, or at least one of the most immediate requirements is oxygen, which is critically important for reconstruction of new vessels and connective tissue and provision of a competent resistance against infection. Sustained oxygen is therefore vital for the healing of patients with non-healing wounds. This has been proven for wounds associated with peripheral ar-

terial occlusive disease (PAOD) and diabetic foot ulcers. In addition, there is increasing evidence that hypoxia is a central aspect for almost all types of non-healing wounds.

Non-healing wounds are a significant problem in health care systems worldwide. In the industrialised world almost 1–1.5% of the population will have a non-healing wound at any one time. Furthermore, wound management is expensive; in Europe it is expected that wound management accounts for 2–4% of health-care budgets. These figures will probably rise along with an increase in the elderly and diabetic population.

Oxygen therapy is a general term which includes amongst others Hyperbaric Oxygen Therapy (HBOT) and Topical Oxygen Therapy (TOT). HBOT has been known for many years and is well established in wound treatment regimes. Therefore, in this paper HBOT is being presented as the synopsis of mechanisms of action, clinical evidence and current recommendations of internationally recognised hyperbaric organisations. On the other hand, during recent years,

new therapeutic approaches based on TOT have been developed to support wound healing. Due to its relative novelty and small number of clinical studies when compared to HBOT, the description of several methods classified generally as TOT are presented in more detail with description of most, including still ongoing, studies. The imbalance in volume of description between those two treatment methods created by this approach must be carefully judged by the reader with special attention to the grade of evidence and level of recommendations. In future, the relation between TOT and HBOT, with possible synergistic action must be taken into account when planning further studies.

DOCUMENT AIM, OBJECTIVES AND SCOPE

The overall aim of this document is to highlight the present knowledge with regard to the use of oxygen therapies in the care and treatment of wounds of different aetiologies, which fail to progress through an orderly and timely sequence of repair. In this document, these types of wounds are defined as “non-healing”.

Excluded from this document are animal and cellular models, acute wounds (e.g. surgical/trauma wounds), and burns. Furthermore, the distribution of supplementary systemic oxygen at barometric pressure in connection with surgery is not covered by this document.

The document will provide an overview of treatment options, as well as assessments of the best available evidence on their respective results. In addition, the document will go into detail with specific aspects and current discussions regarding the use of oxygen in wound healing including:

- The role of oxygen and hypoxia in the wound healing process
- Patient perspectives of oxygen treatment
- Cost-effectiveness aspects of oxygen therapies
- Discussing what is still controversial and giving suggestions for future actions.

In line with other similar documents published by EWMA during recent years, the document structure is inspired by the different elements that are usually included in the health technology assessment (HTA) approach. Thus, it is not a traditional position document that discusses different treatment strategies, when to use which product, or assesses one product against another, but rather a holistic picture of the current practice and reality of the use of oxygen therapies in wound healing.

STRUCTURE AND CONTENT OF THE DOCUMENT

The document is presented in nine chapters:

- **Chapter 1:** Introduction to the document including its aim, objectives and scope as well as a short presentation of its structure
- **Chapter 2:** Presents the methodology and terminology used in the document.
- **Chapter 3:** Introduces and discusses the role of molecular oxygen in living tissue in general and in wound healing processes specifically.
- **Chapter 4:** Presents and discusses TOT
- **Chapter 5:** Presents and discusses HBOT
- **Chapter 6:** Focuses on patient perspectives of oxygen treatment including Health Related Quality of Life ‘ and patient education.
- **Chapter 7:** Presents considerations regarding economics and cost-efficiency of TOT as well as HBOT
- **Chapter 8:** Presents the conclusions of the document
- **Chapter 9:** Provides a brief look towards expected new developments over the next few years in the area of oxygen therapies and wound healing.

The document has been published as an online supplement to the Journal of Wound Care and can be downloaded via www.ewma.org

Presentation of the “Use of oxygen therapies in wound healing: Focus on topical and hyperbaric oxygen treatment” document is the main topic of a key session which is scheduled for Wednesday 3 May 16.45-18.00 in the room “Elicium 2”.