INAHTA Briefs

Issue 2008/037

Title **Hyperbaric Oxygen Therapy: A Rapid Assessment**

Agency **KCE, Belgian Health Care Knowledge Centre**
Wetstraat 62, BE-1040 Brussels, Belgium;
Tel: +32 2 287 3388, Fax: +32 2 287 3385; hta@kenniscentrum.fgov.be, www.kenniscentrum.fgov.be

Reference Report no 74C, 2008

Aim

To gather evidence about the clinical effectiveness of hyperbaric oxygen therapy, to examine its economic aspects, to describe current practice and organization in Belgium, and to make recommendations for the most appropriate use of this therapy.

Conclusions and results

Hyperbaric oxygen therapy (HBOT) has been used for many indications. However, few indications have been subject to rigorous randomized controlled clinical trials. Hence, we have insufficient good-quality data to properly assess this therapeutic modality. Stakeholders and decision makers should have access to evidence-based information when deciding whether or not to support and reimburse the use of HBOT for specific indications. Recommendations that are mainly consensus based cannot be considered good evidence.

Physicians in Belgium provide HBOT for a wide range of indications. But the impact of HBOT on the National Health Insurance budget is minimal, due to restrictive rules that limit reimbursement for the first and second days of treatment.

Evidence is insufficient to simply extend reimbursement of this therapy regardless of indication. If decision makers decide to offer more attractive reimbursement for specific indications, this should be linked to a proper randomized research setting with the explicit goal to collect data on effectiveness and costs.

Recommendations

1. No expansion of HBOT capacity is recommended since capacity is not a problem and geographic distribution appears to be sufficient, given the currently "accepted" indications.
2. HBOT in treating decompression accidents and severe gas embolism is supported by historical empirical evidence and by wide consensus. HBOT in treating carbon monoxide poisoning to avoid long-term neurological sequels is not supported by clinical evidence (low-quality evidence from small RCTs on the clinical non-efficacy of HBOT; no evidence from RCTs on short-term effectiveness for carbon monoxide poisoning).
3. Conditional financing for experimental treatment could be considered and/or research encouraged specifically for indications of sufficient clinical relevance and where some evidence is available. For diabetic ulcers and selected cases of radiation-induced tissue injury, there is low-quality evidence from small RCTs on the clinical efficacy of adjuvant HBOT. For acute deafness that presents early, some evidence shows a beneficial effect although the clinical relevance of this benefit is questionable.
4. HBOT for other indications is not supported due to no, or very low-quality, evidence.
5. For common indications, further research on larger populations could be performed both on a national basis (given the number of Belgian centers and locally available expertise) and internationally. Research on rare indications would require multicenter studies. An initiative at the European level would probably be needed to gather evidence on those indications. Specific research financing sources are unclear, although protocols were developed previously with European support.
6. These recommendations should be revised when newer and better data on efficacy of HBOT become available.

Methods

Systematic review, analysis of Belgian data (questionnaire), and cost analysis.

Further research/reviews required

None.

Written by Mattias Neyt, KCE, Belgium

ISSN 1654-501X