



TITLE: Management of Calciphylaxis in Adult Patients with End-Stage Renal Disease: Evidence for Optimal Therapy and Guidelines

DATE: 14 April 2011

RESEARCH QUESTIONS

1. What is the optimal therapy for the management of calciphylaxis in adult patients with end-stage renal disease?
2. What is the clinical effectiveness of bisphosphonates versus sodium thiosulphate for the management of calciphylaxis in adult patients with end-stage renal disease?
3. What are the guidelines for the management of calciphylaxis in adult patients with end-stage renal disease?

KEY MESSAGE

No evidence-based studies were identified; therefore, no conclusions regarding the management of calciphylaxis in adult patients with end-stage renal disease can be presented.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2011, Issue 3), University of York Centre for Reviews and Dissemination (CRD) databases, ECRI (Health Devices Gold), EuroScan, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2008 and April 11, 2011. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

Disclaimer: The Rapid Response Service is an information service for those involved in planning and providing health care in Canada. Rapid responses are based on a limited literature search and are not comprehensive, systematic reviews. The intent is to provide a list of sources of the best evidence on the topic that CADTH could identify using all reasonable efforts within the time allowed. Rapid responses should be considered along with other types of information and health care considerations. The information included in this response is not intended to replace professional medical advice, nor should it be construed as a recommendation for or against the use of a particular health technology. Readers are also cautioned that a lack of good quality evidence does not necessarily mean a lack of effectiveness particularly in the case of new and emerging health technologies, for which little information can be found, but which may in future prove to be effective. While CADTH has taken care in the preparation of the report to ensure that its contents are accurate, complete and up to date, CADTH does not make any guarantee to that effect. CADTH is not liable for any loss or damages resulting from use of the information in the report.

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RESULTS

This is an update to a previous Rapid Response report completed in 2008 (Health Technology Inquiry Service. Management of calciphylaxis in adult patients with end-stage renal disease: evidence for optimal therapy and guidelines. Ottawa: Canadian Agency for Drugs and Technologies in Health; 2008 Jan 17).

For the current report no relevant health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, or evidence-based guidelines were identified regarding the management of calciphylaxis in adult patients with end-stage renal disease. Related articles of potential interest are located in the appendix.

OVERALL SUMMARY OF FINDINGS

No literature was identified; therefore, no summary pertaining to the evidence regarding the management of calciphylaxis in adult patients with end-stage renal disease can be presented.

REFERENCES SUMMARIZED

Health technology assessments

No literature identified.

Systematic reviews and meta-analyses

No literature identified.

Randomized controlled trials

No literature identified.

Non-randomized studies

No literature identified.

Guidelines and recommendations

No literature identified.

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APPENDIX – FURTHER INFORMATION:

Review articles

1. Torregrosa J-V, Ramos AM. Use of bisphosphonates in chronic kidney disease. Nefrologia [Internet]. 2010 [cited 2011 Apr 11];30(3):288-297. Available from: <http://www.revistanefrologia.com/modules.php?name=articulos&idarticulo=10320&idlanga=EN>
2. Bhambri A, Del Rosso JQ. Calciphylaxis: a review. J Clin Aesthet Dermatol [Internet]. 2008 Jul [cited 2011 Apr 11];1(2):38-41. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2989826/pdf/jcad_1_2_38.pdf
[PubMed: PM21103322](#)
3. Raymond CB, Wazny LD. Sodium thiosulfate, bisphosphonates, and cinacalcet for treatment of calciphylaxis. Am J Health Syst Pharm. 2008 Aug 1;65(15):1419-29.
[PubMed: PM18653812](#)
4. Rogers NM, Coates PT. Calcific uraemic arteriopathy: an update. Curr Opin Nephrol Hypertens. 2008 Nov;17(6):629-34.
[PubMed: PM18941358](#)

Additional information

5. Hayden MR, Goldsmith DJ. Sodium thiosulfate: new hope for the treatment of calciphylaxis. Semin Dial. 2010 May;23(3):258-62. [PubMed: PM20636917](#)
6. Mason D, Best SD. Calcific uremic arteriopathy: contemporary pharmacotherapy. Adv Chronic Kidney Dis. 2010 Sep;17(5):428-38. [PubMed: PM20727513](#)
7. Rogers NM, Coates PT. Calcific uremic arteriopathy--the argument for hyperbaric oxygen and sodium thiosulfate. Semin Dial. 2010 Jan;23(1):38-42. [PubMed: PM20331817](#)
8. Schlieper G, Brandenburg V, Ketteler M, Floege J. Sodium thiosulfate in the treatment of calcific uremic arteriopathy. Nat Rev Nephrol. 2009 Sep;5(9):539-43. [PubMed: PM19701230](#)
9. Hayden MR, Goldsmith D, Sowers JR, Khanna R. Calciphylaxis: calcific uremic arteriopathy and the emerging role of sodium thiosulfate. Int Urol Nephrol. 2008;40(2):443-51. [PubMed: PM18369733](#)