



ERNE HOSPITAL
ENNISKILLEN, CO. FERMANAGH. BT74 6AY. TELEPHONE ~~028 255 255~~ FACSIMILE ~~028 255 255~~

10/12/03

ATTENTION DONNA SCOTT.

Herewith the abstract of the article I mentioned (PEDIATRICS). I cannot retrieve the full article but might be easily retrieved from Queen's Medical Library.

The other abstract caught my eye - an ~~am~~ prestigious journal but a very prestigious author who obviously feels it is a message that still needs promoting as recently as August 2003 (ie QJM = quarterly Journal of medicine - the Hospital for Sick Children Toronto has a worldwide ~~with~~ Reputation).

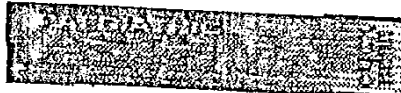
Sincerely

DR J. M. O'Donoghue,
Erne Hospital.

(4)

Pediatrics - Abstracts: Moritz and Ayus 111 (2): 227

Page 1 of 2

PEDIATRICS

HOME PAGE EDITORIAL BOARD CONTACTS

QUICK SEARCH: (advanced)

Author: Keyword(s):
 Go: fluid
 Year: Vol: Page:

PEDIATRICS Vol. 111 No. 2 February 2003, pp. 227-230

Prevention of Hospital-Acquired Hyponatremia: A Case for Using Isotonic Saline

Michael L. Moritz, MD* and Juan Carlos Ayus, MD†

*Division of Nephrology, Department of Pediatrics, Children's Hospital of Pittsburgh, University of Pittsburgh School Medicine, Pittsburgh, Pennsylvania

†Department of Medicine, University of Texas Health Science Center at San Antonio, San Antonio, Texas

Objective. The current standard of care in pediatrics is to administer hypotonic saline in maintenance parenteral fluids. The safety of this approach has never been evaluated.

Methods. A review of the literature reveals that the administration of hypotonic fluids is potentially dangerous and may not be physiologic for the hospitalized child.

Results. There have been >50 reported cases of neurologic morbidity and mortality, including 26 deaths, in the past 10 years resulting from hospital-acquired hyponatremia in children who were receiving hypotonic parenteral fluids. Common childhood conditions requiring parenteral fluids, such as pulmonary and central nervous system infections, dehydration, and the postoperative state, are associated with a nonosmotic stimulus for antidiuretic hormone production, which can lead to free water retention and hyponatremia. Children are at particularly high risk of developing symptomatic hyponatremia as they have a larger brain-to-skull size ratio.

Conclusions. The administration of isotonic saline in maintenance parenteral fluids is the most important prophylactic measure that can be taken to prevent the development of hyponatremia in children who receive parenteral fluids.

Key Words: hyponatremia • child • treatment • fluid • intravenous • encephalopathy

Abbreviations: ADH, antidiuretic hormone • SIADH, syndrome of inappropriate secretion of antidiuretic hormone

Received for publication Mar 25, 2002; accepted Jul 8, 2002.

This article has been cited by other articles:

<http://pediatrics.aappublications.org/cgi/content/abstract/111/2/227?maxtoshow=&HITS=10&hits=1...> 10/12/2003

- ▶ [Full Text of this Article](#)
- ▶ [Reprint \(PDF\) Version of this Article](#)
- ▶ [Citation Map](#)
- ▶ [Email this article to a friend](#)
- ▶ [P²Rs: Submit a response to this](#)
- ▶ [Published P²Rs for this article](#)
- ▶ [Similar articles found in:](#)
- [Pediatrics Online](#)
- [ISI Web of Science](#)
- [PubMed](#)
- ▶ [PubMed Citation](#)
- ▶ [This Article has been cited by:](#)
- [other online articles](#)
- ▶ [Search PubMed for articles by:](#)
- [Moritz, M. L. || Ayus, J. C.](#)
- ▶ [Search for citing articles in:](#)
- [ISI Web of Science \(2\)](#)
- ▶ [Alert me when:](#)
- [new articles cite this article](#)
- ▶ [Download to Citation Manager](#)
- ▶ [Collections under which this article appears:](#)
- [Genitourinary Tract](#)



HOME HELP FEEDBACK SUBSCRIPTIONS ARCHIVE SEARCH TABLE OF CONTENTS

QUICK SEARCH: [advanced]
 Authors: Keyword(s):
 Go:
 Year: Vol: Page:

OXFORD
Journals

J Med 2003; 96: 601-610
 © 2003 Association of Physicians

Commentary

How to select optimal maintenance intravenous fluid therapy

M.A.S. Shafiee¹, D. Bohn², E.J. Hoom² and M.L. Halperin¹

From the ¹Renal Division, St. Michael's Hospital, University of Toronto, and
²Department of Critical Care Medicine, Hospital for Sick Children, Toronto, Canada and the Department of
 Anaesthesiology, University of Toronto, Toronto, Canada

Hyponatraemia is the commonest electrolyte abnormality in hospitalized patients. If the plasma sodium concentration (P_{Na}) declines to ~120 mM in <48 h, brain cell swelling might result in herniation, with devastating consequences. The volume and/or the composition of fluids used for intravenous therapy often contribute to the development of acute hyponatraemia. Our hypothesis is that the traditional calculation of the daily loss of sensible water overestimates this parameter, leading to an excessive daily recommended requirement for water. We offer suggestions to minimize the risk of iatrogenic hyponatraemia.

Address correspondence to: Professor M.L. Halperin, Division of Nephrology, St. Michael's Hospital Annex, 38 Shuter Street, Toronto, Ontario, Canada, M5B 1A6. e-mail: mitchell.halperin@utoronto.ca

- » [Full Text of this Article](#)
- » [Reprint \(PDF\) Version of this](#)
- » [Email this article to a friend](#)
- » [Similar articles found in:](#)
- [QJMed Online](#)
- [PubMed](#)
- » [PubMed Citation](#)
- » [Search PubMed for articles by:](#)
- [Shafiee, M.A.S. || Halperin, M.L.](#)
- » [Alert me when:](#)
- [new articles cite this article](#)
- » [Disclaimer](#)
- » [Download to Citation Manager](#)

HOME HELP FEEDBACK SUBSCRIPTIONS ARCHIVE SEARCH TABLE OF CONTENTS
 Copyright © 2003 Association of Physicians