

Adair, Jonathan

From: Russell, George
Sent: 10 February 2010 14:32
To: Starrs, Tony
Cc: Moreland, Mary
Subject: TRIM DHSSPS Document : DH1/10/22047 : RE: Final Version Hyponatraemia Wall Chart for Children 08-02-2010.
Attachments: Email_RE: TRIM DHSSPS Document : DH1/10/20980 : FW: Hyponatraemia Wall Chart for Children 05-02-2010..html; HSC (SQSD) 20-07 Wallchart (A3) Final Print Version-06 08.02.10.pdf; RE Final Version Hyponatraemia Wall Chart for Children 08-02-2010.tr5
Importance: High

Tony

Good afternoon.

Please find an attachment giving the version of the Hyponatraemia Wall Chart for Children, to be printed.

150 X A3 copies are required and completed in the same finish as the previous batch.

The Standards, Quality Guidelines Unit will pay for printing.

The TRIM reference for the document is DH1-10-22047

The TRIM title for the document is Re Final Version of the Hyponatraemia Wall Chart for Children 08-02-2010.

Happy to discuss.

Many thanks

George

-----< TRIM Record Information >-----

Record Number : DH1/10/22047

Title : RE: Final Version Hyponatraemia Wall Chart for Children 08-02-2010.

PARENTERAL FLUID THERAPY for CHILDREN 1 & YOUNG PERSONS (AGED OVER 4 WEEKS & UNDER 16 YEARS)

Initial management guideline

Sept
2007

Amended February 2010

Monitoring & observations essential

ALL CHILDREN

Admission Weight. U&E (unless
child is well & for elective surgery)

12 Hourly -

Assess In / Output, plasma
glucose

Daily - Clinical reassessment.
U&E (more often if abnormal; 4-6
hourly if $\text{Na}^+ < 130 \text{ mmol/L}$).

ILL CHILDREN

May need:

Hourly - HR, RR, BP, GCS. Fluid In/
Output (urine osmolality if
volume cannot be assessed)
2-4 hourly - glucose, U&E, +/-
blood gas.

Daily - weight if possible

Each shift

Handover and review of fluid
management plan.

If plasma $\text{Na}^+ < 130 \text{ mmol/L}$ or
> 160 mmol/L or plasma Na^+
changes > 5 mmol/L in 24
hours ask for senior advice

YES

Is shock
present?

NO

DKA / burns: initiate
departmental protocol.
Renal / cardiac /
hepatic - get senior
advice.

YES

Is there a
fluid deficit?

NO

Prescribe
Maintenance
fluids

CALCULATION OF 100% MAINTENANCE RATE

- (a) for first 10 kg: 100 ml/kg/ day \equiv 4ml/kg/hr
(b) for second 10 kg: 50 ml/kg/ day \equiv 2ml/kg/hr
(c) for each kg over 20 kg: 20 ml/kg/ day \equiv 1ml/kg/hr
[for 100% daily maintenance add together (a) + (b) + (c)]

MAXIMUM: in females 80 mls per hour; in males 100mls per hour.
**If the risk of Hyponatraemia is high consider initially reducing
maintenance volume to two thirds of maintenance.**

ADMINISTER RAPID FLUID BOLUS

Give 20 ml/kg sodium chloride 0.9% IV or Intraosseous
[10 ml/kg if history of haemorrhage or in diabetic ketoacidosis]
Reassess. Repeat bolus if needed. Call for senior help.

(Up to 60 ml/kg may be needed. Use blood after 40 ml/kg if patient has haemorrhaged)

YES

Can child be
managed with
oral fluids?

**PRESCRIBE ORAL
REHYDRATION SOLUTION**

ESTIMATE DEFICIT

FLUID DEFICIT = (% dehydration $\times \text{kg} \times 10$) as mls of:
sodium chloride 0.9%

The volume of fluid to be prescribed is: fluid deficit MINUS volume of any fluid bolus received

Prescribe this residual volume of deficit separately from the maintenance prescription.

Give over 24 hours (but over 48 hours if $\text{Na}^+ < 135$ or $> 145 \text{ mmol/L}$)

ONGOING LOSSES: calculate at least 4 hourly. Replace with an equal volume of:
sodium chloride 0.9% (with or without pre-added potassium)

Be prepared to change fluid type and volume according to clinical reassessment, electrolyte losses and test results

PRESCRIBE INITIAL IV MAINTENANCE FLUID AND TIME FOR REASSESSMENT

Patients particularly at risk of hyponatraemic complications:

peri-operative patients; patients with head injuries; gastric losses; severe sepsis; hypotension; intravascular volume depletion; bronchiolitis; gastroenteritis with dehydration; abnormal plasma sodium, particularly if less than 138 mmol/L but also when greater than 160 mmol/L; salt wasting syndromes.

Fluid choices: glucose containing fluid normally required if under 1 year old and may also be required by older children

sodium chloride 0.9% (with/ without pre-added glucose 5%)

or
Hartmann's Solution

or

Solution Corporately Approved at Trust Level

Other Patients:

sodium chloride 0.45% with pre-added glucose 2.5% or 5%

All Patients:

Alter fluid rate according to clinical assessment. Change electrolyte and glucose content of infusion fluid according to test results.

COMMENCE ORAL FLUIDS & DISCONTINUE IV FLUIDS AS SOON AS POSSIBLE

Hypokalaemia ($< 3.5 \text{ mmol/L}$): Check for initial deficit. Maintenance up to 40 mmol/L IV potassium usually needed after 24 hrs using pre-prepared potassium infusions as far as possible. Consult Trust Policy on IV strong potassium.

Oral intake and Medications: volumes of intake, medications & drug infusions must be considered in the fluid prescription.

Hypoglycaemia ($< 3 \text{ mmol/L}$). Medical Emergency: give 5 ml/kg bolus of glucose 10%. Review maintenance fluid, consult with senior and recheck level after 15-30 mins. INTRA-OPERATIVE PATIENTS: consider monitoring plasma glucose.

Symptomatic Hyponatraemia: check U&E if patient develops nausea, vomiting, headache, irritability, altered level of consciousness, seizures or apnoea. This is a Medical Emergency and must be corrected.

Commence infusion of sodium chloride 2.7% at 2 ml/kg/hour initially and get senior advice immediately.