

A DELPHI ANALYSIS TO REACH CONSENSUS ON PREOPERATIVE CARE IN INFANTS WITH HYPERTROPHIC PYLORIC STENOSIS

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Pyloric stenosis:

Delphi analysis

Recommendation on:

1. Blood sampling
2. Required serum concentrations before pyloromyotomy
3. Intravenous fluid therapy

Pediatric
surgeons (N=16)



Pediatric
anesthetists (N=11)



Pediatricians (N=6)





The Delphi technique

First Round

- Rating statements

Second Round

- Group response is fed back
- Revise or criticize

Third round

- Presentation of recommendation

The RAND/UCLA Appropriateness Method User's Manual

Fitch K, Bernstein SJ, Aguilar MS, et al. The RAND/UCLA Appropriateness Method User's Manual. Santa Monica, CA: RAND; 2001.





Laboratory values and cut-off

Recommended

- **pH** (≤ 7.45)
- **Base excess** (≤ 3.5)
- **Bicarbonate** (< 26 mmol/L)
- **Glucose** (≥ 4.0 mmol/L)
- **Sodium** (≥ 132 mmol/L)
- **Potassium** (≥ 3.5 mmol/L)
- **Chloride** (≥ 100 mmol/L)





Fluid resuscitation

- **Recommended** 150ml/kg/day isotonic crystalloid with 5% dextrose and 10-20 mEq/L potassium.
- **Inappropriate** 5% dextrose in 0.45% saline¹

¹ McNab S, Ware RS, Neville KA, et al. Isotonic versus hypotonic solutions for maintenance intravenous fluid administration in children. Cochrane Database Syst Rev. 2014;(12):CD009457.





Conclusion

- Normalize:
 - pH
 - Base excess and bicarbonate
 - Glucose
 - Electrolytes
- Resuscitation fluid:
 - Isotonic crystalloid with 5% dextrose
 - 10-20 mEq/L potassium





Thank you for your attention!

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