

Hypoglycaemia – guidelines for management

Protocol Responsibilities and Authorisation

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Protocol Review History

Version	Updated by	Date Updated	Description of Changes
4	D Bouchier & D Harris	September 2016	Updating

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1. Overview

1.1 Purpose

To identify and treat hypoglycaemia.

1.2 Definitions

Whole blood glucose <2.6mmol/L (measured on blood gas analyser).

2. Clinical Management

2.1 Diagnosis:

The following infants are at most risk for hypoglycaemia and should be monitored:

- (a) SGA or LGA infants
- (b) Infants of diabetic mothers
- (c) Any infant admitted to NICU
- (d) Any infant who is unwell

2.2 Monitoring guideline:

- Initial blood glucose measured at age 1 hour, unless clinical symptoms indicate need for earlier analysis.
- Monitor 2-4 hourly until blood glucose ≥ 2.6 mmol/L for 12 hours
- Monitor pre-feed if enterally fed.

3. Management:

A. Initial Management

- (i) Unwell infant -
 - Intravenous 10% dextrose (2ml/kg) over 10 minutes, followed by 10% dextrose infusion (4-9mg/kg/min)

		Daily Fluid Volume	
		60 ml/kg/day	90 ml/kg/day
% Dextrose Infusion	10%	4.2 mg/kg/min	6.3 mg/kg/min
	12.5%	5.2 mg/kg/min	7.8 mg/kg/min
	15%	6.3 mg/kg/min	9.4 mg/kg/min

- Recheck BSL 15 min after 10% Dextrose bolus

(ii) Well Infant

- 40% dextrose gel (0.5 mL/kg to buccal mucosa)
- Enteral feed (7.5 mL/kg – this equivalent to 90 mL/kg/day as 2 hourly feeds)
 - EBM
 - Formula (gain parental consent)
 - 10% dextrose (if EBM unavailable and formula declined)
- Recheck BSL 30 mins after feed/dextrose gel.

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B. Subsequent Management**(i) Unwell Infant**

- (a) If BSL > 2.6 mmol/L – titrate IV Dextrose solution to maintain BSL between 2.6 – 6mmol/L

- (b) If BSL < 2.6 mmol/L – increase IV Dextrose solution stepwise until a glucose infusion rate of 9.4 mg/kg/min is reached.
 - If BSL remains < 2.6 mmol/L proceed to further investigation (see Neonatal Hypoglycaemia Evaluation Protocol). Following completion of the evaluation prescribe Hydrocortisone (see Drug Manual).

 - If BSL still remains < 2.6 mmol/L despite the above actions consider – central line for administration of higher concentrations of Dextrose and/or glucagon infusion (see Drug Manual).

 - If BSL still remains < 2.6 mmol/L despite above – consider Somatostatin infusion (5 – 20 micrograms/kg/day as intravenous or subcutaneous infusion).

(ii) Well Infant

- (a) If BSL > 2.6 mmol/L continue with 2 hourly enteral feeds

- (b) If BSL < 2.6 mmol/L –
 - Give further dose of Dextrose gel (to buccal mucosa)
 - Continuous OG feeds (90 mL/kg/day – initially)
 - Add Polycal (5g / 100 mL of feed)

 - If the above strategies are ineffective or feed not tolerated:
 - IV 10% Dextrose (4-6 mg/kg/min of glucose)

 - As BSL stable move to enteral feeds (\pm Polycal) 2 hourly then 3 hourly intervals.

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MANAGEMENT OF HYPOGLYCAEMIA

