PaedOnc: Management of Hypomagnesaemia

If unexpected consider repeating sample if genuine identify aetiology and check for symptoms and signs. Urgency of correction depends on how low magnesium is and on presence of symptoms/signs

Symptoms and signs:

- lethargy, confusion, tremor, ataxia, nystagmus, tetany, seizures, ECG changes (prolonged PR & QT intervals).
- Hypomagnesaemia may contribute to hypokalaemia and hypocalcaemia.

Consider likely cause of hypomagnesaemia

- Urinary loss due to drugs cisplatin, amphotericin, carboplatin, ifosfamide,
- post BMT particularly when on ciclosporin,
- Diarrhoea
- Inadequate levels in TPN

Mild to moderate 0.5-0.7 mmol/L and asymptomatic

Prescribe oral supplementation if tolerated

Oral magnesium:
0.2mmol/kg every 8 hours (over 40kg, max dose = 8mmol)

Available as magnesium glycerophosphate 4mmol tablets, or 2mmol capsules, or magnesium oxide 4mmol capsules.

In hyperphosphataemia use magnesium oxide.

Caution: oral magnesium is poorly absorbed and can cause diarrhoea.

Severe <0.5 mmol/L and or symptomatic

Prescribe IV magnesium replacement,

Intravenous magnesium sulphate: 0.2- 0.4mmol/kg over 2 hours.

PHDU/PICU only – doses may be given more rapidly over at least 20 minutes.

Available as 10% magnesium sulphate (contains 0.4mmol/ml) which may be given either peripherally or centrally. May be used undiluted, or diluted with sodium chloride 0.9% or glucose 5%.

Caution: may cause vasodilation and hypotension. Monitor blood pressure during and after infusion.

If drops to severe or becomes symptomatic

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Wessex Paediatric Oncology Supportive Care Guidelines
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