

Lactation tetany in Mares (Eclampsia)

Karima Al-Salihi

Definition

- It is a metabolic disease affecting lactating Mares characterized by hypocalcemia and hypomagnesemia.
- A number of factors appear to be predisposing to the disease. Most cases occur in lactating mares, either at about the **tenth day after foaling or 1 to 2 days after weaning.**

Epidemiology

Dietary Mg deficiency in horses is very rare, unless extreme conditions combine to result in decreased consumption and increased demand, eg,

- **long-distance transportation** of unfed lactating mares
- **prolonged administration of enteral or parenteral fluid**
- **nutrition solutions** deficient in Mg.

Despite this, Mg supplements have been advocated by laymen as a calming agent or as an adjunctive therapy for equine metabolic syndrome, and even to prevent laminitis.

➤ The maintenance Mg requirement for horses has been estimated at

13 mg/kg body wt/day

➤ It can be provided by a diet containing 0.16% Mg (1,600 ppm of feed)

➤ by adding Mg oxide at 31 mg/kg/day,
MgCO₃ at 64 mg/kg/day,

➤ MgSO₄ at 93 mg/kg/day.

This may be important when formulating oral replacement fluids for inappetent horses.

For **a 500-kg horse**, this would equate to Mg oxide at ~16 g/day, MgCO_3 at 32 g/d, or MgSO_4 at 47 g/day.

Growing, lactating, and exercising animals may require double these amounts.

Horses that are obtaining adequate feed by grazing, with hay or grain, are unlikely to be Mg deficient.

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Clinical finding

- (1) Severely affected animals sweat profusely.
- (2) Difficulty in moving and incoordination, because of tetany of the limbs.
- (3) Rapid respiration and dilatation of the nostrils.
- (4) Muscular fibrillation, particularly the masseter and region.
- (5) Inability to swallow food or water and decrease defecation and urination.
- (6) Within 24 hours, the animal goes down and tetanic convulsion develops.
- (7) Mare dies in about 48 hours after the onset of illness.

Treatment

Injection of Ca solution causes a rapid recovery.