



When should I refer my neonate?

There are no hard and fast rules for referral as many factors will influence whether an individual animal is referred, writes Kevin TT Corley BVM&S PhD DECEIM DACVIM DACVECC MRCVS, Veterinary Advances Ltd, Co Kildare

Some factors to consider when referring a neonate include the following:

- What is the likely survival of the foal with treatment in the field?
- What is the likely survival of the foal in a referral hospital?
- How certain can you be about the diagnosis?
- What are the likely costs of treatment in the field?
- What are the likely costs of treatment in the hospital?
- What is the economic value of the foal?
- What is the emotional value of the foal?
- Are the stable personnel ready and able to give 24-hour-a-day care?
- Are the stable personnel able to recognise when things are not going well?
- Will attending to this foal possibly several times a day, be feasible for you, the vet, at a very busy time of year?
- Will you be able to properly bill all your time and advice?

All of these factors need to be taken into account when making a decision about referral. Skill levels and availability of staff on the farm to look after the foal are some of

the most important factors to consider. Looking after a sick foal can often be a 24-hour-day activity, with hourly feeds, frequent checks and constant monitoring. It is my experience that, often, efforts (for example with an orphan foal) are excellent for the first one to two days and then everyone gets exhausted.

DIFFERENCES OF SURVIVAL BETWEEN FIELD AND HOSPITAL

The differences of survival between field and hospital depends on the disease condition and the skill and availability of the staff in the field and at the hospital. For some conditions, such as sepsis, we believe that outcomes in the field are significantly worse than in the hospital, especially for the most compromised patients. Although we do not have accurate figures for survival rates in the field, comparing survival rates in different hospitals leads us to believe this. For example, in a study from the University of Leipzig, Germany, only 13% (19/46) of foals with a positive sepsis score survived¹ compared to 62.5% (25/40) of foals at Marion DuPont Scott Equine Medical Center, Virginia, US, during a similar period.²

WHICH CONDITIONS SHOULD I CONSIDER REFERRING?

RESUSCITATION AT BIRTH/DYSTOCIA

The effects of lack of oxygen during the birthing process may not be immediately apparent. Foals typically show the most severe signs 18-36 hours after the asphyxia event. Early intervention can lead to the best outcomes, lowest bills and shortest hospital stays. Therefore, all foals with a known period of asphyxia should be considered for referral.

CONTRACTURE

Many cases of contracture can be managed on the farm by casting or splinting. Foals should be considered for referral if they cannot stand, especially if there is nobody available 24 hours a day to help them nurse, at least hourly. Foals, where the contracture has not resolved after two days of casting or splinting with two doses of oxytetracycline, should be referred. Foals, where the contracture is such that the leg will not straighten to greater than 90 degrees, should be humanely euthanised.

LAME FOALS

It should be assumed that any acutely lame foal that is fewer than 28 days old has a joint infection, until proven otherwise. Hip joint, shoulder joint, elbow joint and coffin joint infection can sometimes be difficult to detect. Serum amyloid A concentrations are very useful to decide if there is likely infection (>100mg/L would indicate likely infection). Stall-side semi-quantitative kits are available. If there is obvious heat and swelling in a joint, there is the option to do a needle flush under sedation or anaesthesia on the farm, or to refer. If a foal has not responded to two needle flushes, it should be referred for arthroscopic exploration of the joint and removal of fibrin if it is present.

DIARRHOEA

Any foal with watery diarrhoea that is not nursing the mare should be considered for referral, because these

foals can get life- (or kidney) threatening dehydration and hypovolaemia very quickly. Sometimes, these foals can be managed on the farm by giving fluids four or more times a day, but if they are continuing to nurse from the mare, they can usually be managed on the farm.

COLIC

Foals with colic need to be worked up in a similar way to adult horses with colic. A common condition that can usually be resolved on the farm is meconium impaction. It should be remembered, however, that this diagnosis becomes more and more unlikely as the foal reaches 36 hours of age. Very often, a meconium impaction can be felt with a one-finger rectal examination. Foals that do not respond to an enema and do not have palpable meconium in the rectum should be further worked up, possibly by means of an abdominal ultrasound and considered for referral. As with an adult horse, any foal that does not respond to analgesics should also be referred if circumstances allow.

GENERAL RULES

Foals that should be considered for referral are those that:

- Do not stand within four hours of birth;
- Do not nurse for four hours or longer;
- Are recumbent;
- Are fewer than 28 days old and acutely lame;
- Have marked abdominal swelling;
- Do not respond to initial treatment; or
- Do not have a clear diagnosis.

REFERENCES

1. Sobiraj A, Herfen K, Bostedt H. Clinical symptoms and laboratory data in newborn foals with sepsis – a retrospective analysis. *Pferdeheilkunde* 2001; 17; 673-675
2. Corley KTT, Furr MO. Evaluation of a score designed to predict sepsis in foals. *J Vet Emerg Crit Care* 2003; 13; 149-155

