Comparing Feeding Tubes

Placement of feeding tubes is necessary and beneficial for hospitalized patients unwilling or unable to eat a sufficient amount. If the GI tract is functional, enteral nutrition (EN) is preferred over parenteral nutrition (PN). This retrospective study evaluated complication rates between 2 forms of EN: nasoesophageal (NE) and nasogastric (NG) tubes. The authors hypothesized there would be no significant difference between the two methods. Forty-six dogs were studied (28 with NE tubes and 18 with NG tubes). The distal tip location of the tube was confirmed via radiography or CT. Complications were defined as vomiting/regurgitation and diarrhea (if not present prior to tube placement), clogged tube, tube displacement, aspiration pneumonia, hyperglycemia, epistaxis, and refeeding syndrome. There was no significant difference in complication rates between the 2 groups. All patients received food through the tubes; some also received medications. Not all patients received the same percentage of resting energy requirement per feeding; several patients were fed orally, others received PN in addition to EN, all of which may have affected study outcome. As a retrospective study, the data were dependent on good prior record keeping; it is possible all complications may not have been recorded in the medical records. While both NG and NE tubes appear to supply necessary nutrition with minimal side effects, a larger prospective study would be needed to determine whether one has advantages or disadvantages compared with the other.

Commentary
The goal of this study was to identify whether there was a difference in complication rates between use of NE and NG tubes in dogs. There was no difference in baseline characteristics or complication rates between the groups.—Lisa L. Powell, DVM, DACVECC

Source

Disk Extrusion: A Functional Component to Signs?

Clinical assessment of patients with intervertebral disk (IVD) extrusion is essential in determining prognosis and making treatment decisions. However, for patients that have lost nociception, surgical treatment outcomes are variable. This retrospective study of 60 dogs with IVD extrusion investigated how well neurologic signs correlate with histologically detected spinal cord damage. Clinical neurologic grades correlated significantly with the extent of histologically detected white matter damage; however, 19% of dogs with nociception loss had only minor histologic changes. Severity of spinal cord damage did not correlate with clinical sign duration, Schiff-Sherrington posture, loss of reflexes, or pain on spinal palpation. This study demonstrated that, while most cases of nociception loss also have histologically severe cord damage, some do not. These cases may represent functional rather than structural impairment.

Commentary
The present understanding of IVD herniation in dogs has grown in recent years with advancement of imaging techniques and surgical treatment to allow accurate treatment planning and prognostication. However, relatively little is known about the histopathologic changes within the spinal cord that result in deleterious clinical neurologic function, as tissue sampling is rarely possible.

This study demonstrated a significant correlation between severity of clinical neurologic grades and white matter spinal cord damage in dogs with acute IVD herniation. A wide range of histopathologic scores were noted, including mild scores in dogs with negative nociception, suggesting that clinical neurologic function is more complex than simply structural parenchymal changes. The peripherally located white matter contains the ascending and descending tracts, which provide the sensory and motor connection responsible for limb function, and may be more vulnerable to extradural compression from disk extrusions as noted in this study. However, the clinical ramifications of neurologic injury are clearly multifactorial and may include other cytokine-driven or molecular mechanisms, undetectable by traditional visual microscopic inspection. Further investigation of these pathways may provide additional mechanistic understanding of this complex disease.—Jason Bleedorn, DVM, DACVS

Source