

Case Report

Radiographic Diagnosis of Megaesophagus and Secondary Aspiration Pneumonia in a 6-year-old Friesian Stallion: A Case Report

Sarang Soroori^{1*}, Amirpooya Bahmanabadi², Amir Tavakoli¹, Banafsheh Shateri Amiri¹

1. Department of Surgery and Radiology, Faculty of Veterinary Medicine, University of Tehran, Tehran, Iran.

2. Veterinarian, Tehran, Iran.



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ABSTRACT

Thoracic megaesophagus is a rare and potentially life-threatening condition in horses, characterized by the dilation and decreased motility of the esophagus, leading to impaired swallowing and subsequent regurgitation. Due to the regurgitation and aspiration of food into the respiratory tract, aspiration pneumonia is a common complication associated with megaesophagus. Early and accurate diagnosis is crucial to initiate effective treatment and minimize the risk of complications. The goal of the current study is to diagnose this disorder using contrast radiography. Contrast radiography was performed to evaluate the esophagus following oral administration of a barium sulfate suspension; lateral images were acquired using a mobile x-ray unit. Lateral radiographs with and without oral contrast media show a dilated esophagus with fluid (contrast medium) and air, resulting in a gas-capped fluid line in the dilated caudal thoracic esophagus. In radiographic projections, the cranial thoracic esophagus is also dilated with radiopaque fluid. There is a mixed alveolar and interstitial pattern in the caudal lung lobes, best seen over the caudal margin of the cardiac silhouette. These radiographic findings are indicative of megaesophagus in the thoracic part in association with aspiration pneumonia. The current case report underscores the significance of considering thoracic megaesophagus as a potential cause of respiratory distress in horses. Early diagnosis and a comprehensive approach are crucial in managing this condition successfully. Integration of human medicine techniques, such as anti-reflux medications, physical therapy, and dietary modifications, can improve the quality of life for horses suffering from thoracic megaesophagus.

Keywords: Aspiration pneumonia, Diagnosis, Friesian stallion, Megaesophagus, Radiography

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*** Corresponding Author:**

Sarang Soroori, Associate Professor.

Address: Department of Surgery and Radiology, Faculty of Veterinary Medicine, University of Tehran, Tehran, Iran.

Phone: +98 (21) 61117000

E-mail: Soroori@ut.ac.ir

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Case History

Megaesophagus refers to the chronic dilation and atony of the oesophagus. Atony results in the accumulation of food and saliva in the dilated oesophagus. This condition often results in obstruction and impaction of the oesophagus and subsequent regurgitation and, in some cases, aspiration pneumonia (Broekman & Kuiper, 2002). Megaesophagus is mainly diagnosed in 1-week to 19-year-old Friesian horses and is presumed to be a genetically determined neuromuscular disorder (Boerma et al., 2012). Friesian horses have a perceived high rate of congenital or hereditary diseases, including megaesophagus, that may lead to choke and death. (Komine et al., 2014). Several different underlying pathophysiology for megaesophagus have been proposed, including the loss of interstitial cells of Cajal and idiopathic muscular hypertrophy of the distal esophagus (IMHO). (Ploeg et al., 2015).

Case Presentation

A 6-year-old Friesian stallion with poor body condition was presented with a history of chronic weight loss, coughing, and recurrent episodes of regurgitation. Auscultation revealed mild bilateral lung crackles. Clinical examination revealed decreased body condition, increased respiratory effort, and crackling lung sounds on auscultation. Based on these findings, a suspicion of thoracic megaesophagus with secondary aspiration pneumonia was raised.

A variety of clinical problems occur in many breeds, but some seem to have a remarkably high incidence in Friesian horses (Bezdekova, 2012). In the Netherlands, around 7% of the horse population is the Friesian breed, and during the period 1995–2003, 7% of the caseload of the university clinic was Friesians. When more than 7% of a certain disease is prevalent in Friesian horses, suspicion is raised that genetics may play an important role in the prevalence of that particular disease (Bezdekova & Janalik, 2018).

Diagnostic Testing

Contrast radiography was performed to evaluate the esophageal motility and the presence of any structural abnormalities. Following oral administration of a barium sulfate suspension, lateral images were acquired using a mobile x-ray unit (90 kVp and 10 mAs) with lateral standing positioning. The radiographs revealed

a markedly dilated esophagus with a lack of peristaltic movements, confirming the diagnosis of thoracic megaesophagus (Figure 1). Additionally, a diffuse opacity with interstitial and alveolar patterns was observed in the ventral lung fields, suggestive of aspiration pneumonia (Figure 2).

Assessment

Lateral radiographs with and without oral contrast media showed a dilated esophagus with fluid (contrast medium) and air, resulting in a gas-capped fluid line in the dilated caudal thoracic esophagus. The cranial thoracic esophagus was also dilated with radiopaque fluid. There was a mixed alveolar and interstitial pattern in the caudal lungs, best seen over the caudal margin of the cardiac silhouette. These radiographic findings were indicative of megaesophagus in the thoracic part in association with aspiration pneumonia. Megaesophagus is a relatively rare condition in horses and can have various underlying causes, including congenital defects or acquired neuromuscular dysfunction (Smiet & Kolk, 2013). In this case, the exact cause of the megaesophagus could not be determined, highlighting the need for further research in this area. Contrast radiography played a crucial role in diagnosing the thoracic megaesophagus and identifying the associated complication of aspiration pneumonia (Greet, 1982). Other causes of aspiration pneumonia due to dysphagia related to the presence of *Pantoea agglomerans* are reported in a horse (Mondo et al., 2024). Early and accurate diagnosis allowed for appropriate treatment and management plans to be implemented, ultimately leading to the horse's improvement. This case report highlights the importance of thorough diagnostic investigation, including contrast radiography, in identifying and managing complex gastrointestinal disorders in horses. The successful treatment and positive outcome in this 6-year-old Friesian stallion demonstrate the significance of early intervention and an appropriate approach in challenging cases like this.

Conclusion

The current case report underscores the significance of considering thoracic megaesophagus as a potential cause of respiratory distress in horses. Early diagnosis and a comprehensive approach are crucial in managing this condition successfully.

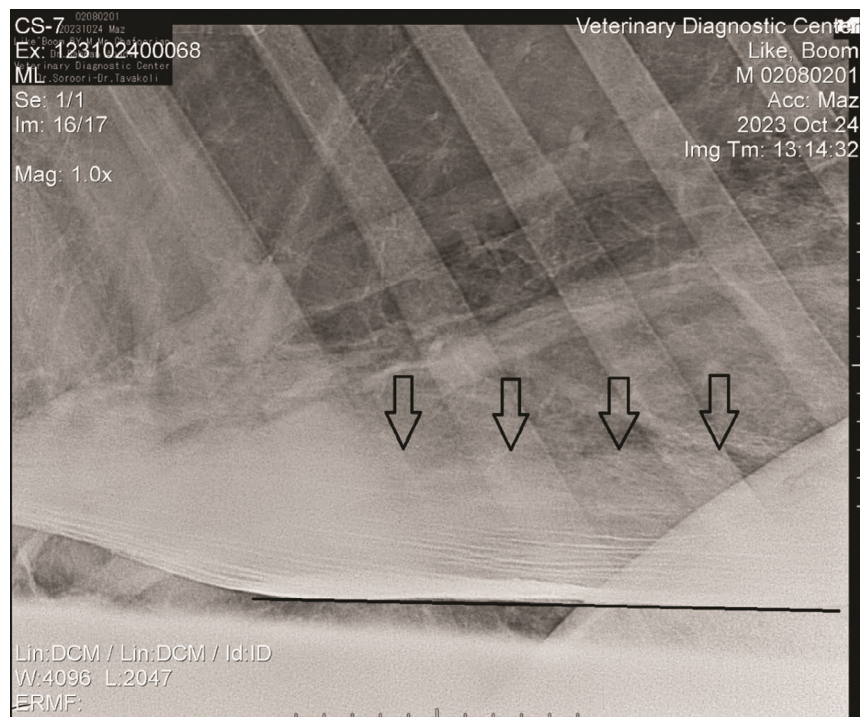


Figure 1. Lateral radiograph of the thoracic region of a 6-year-old Friesian Stallion with oral contrast media

Note: A dilated esophagus with fluid (contrast media) and air, resulting in a gas-capped fluid line (arrowheads) in the dilated caudal thoracic esophagus, is detected. The cranial thoracic esophagus is also dilated with radiopaque fluid (straight line).

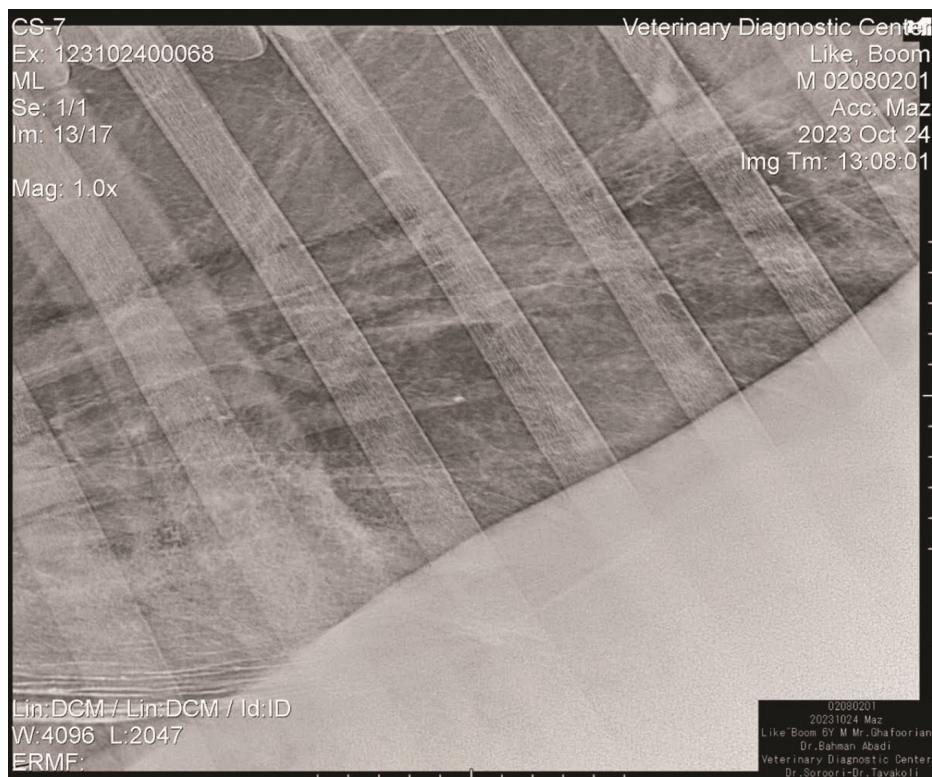


Figure 2. Lateral radiograph of the thoracic region of a 6-year-old Friesian Stallion

Note: A diffuse opacity with an alveolar pattern is observed in the ventral lung fields, suggestive of aspiration pneumonia.

Ethical Considerations

Compliance with ethical guidelines

Compliance with ethical guidelines was ensured, as the horse's veterinarian provided written informed consent for the diagnostic work-up and participation in this case report.

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Authors' contributions

Supervision and investigation: Sarang Soroori; Data collection and investigation: Sarang Soroori, Amirpooya Bahmanabadi, and Amir Tavakoli; Original draft preparation: Banafsheh Shateri Amiri; Conceptualization, methodology, investigation, resources, review and editing: All authors.

Conflict of interest

The authors declared no conflict of interest.

References

- Broekman, L. E., & Kuiper, D. (2002). Megaesophagus in the horse. A short review of the literature and 18 own cases. *The Veterinary Quarterly*, 24(4), 199–202. [DOI:10.1080/01652176.2002.9695136] [PMID]
- Bezdekova, B., & Janalik, P. (2018). Oesophageal disorders in horses: Retrospective study of 39 cases. *Equine Veterinary Education*, 30(2), 94–99. [DOI:10.1111/eve.12703]
- Boerma, S., Back, W., Sloet van Oldruitenborgh-Oosterbaan, M. M. (2012). The Friesian horse breed: A clinical challenge to the equine veterinarian. *Equine Veterinary Education*, 24(2), 66–71. [DOI:10.1111/j.2042-3292.2011.00302.x]
- Broekman, L. E., & Kuiper, D. (2002). Megaesophagus in the horse. A short review of the literature and 18 own cases. *The Veterinary Quarterly*, 24(4), 199–202. [DOI:10.1080/01652176.2002.9695136] [PMID]
- Greet T. R. (1982). Observations on the potential role of oesophageal radiography in the horse. *Equine Veterinary Journal*, 14(1), 73–79. [DOI:10.1111/j.2042-3306.1982.tb02341.x] [PMID]
- Komine, M., Langohr, I. M., & Kiupel, M. (2014). Megaesophagus in Friesian horses associated with muscular hypertrophy of the caudal esophagus. *Veterinary Pathology*, 51(5), 979–985. [DOI:10.1177/0300985813511126] [PMID]

Mondo, E., Rinnovati, R., Scarpellini, R., Illuzzi, A., Giacometti, F., & Savini, F., et al. (2023). Aspiration from dysphagia associated with the presence of pantoa agglomerans in a Horse. *Iranian Journal of Veterinary Medicine*, 18(4), 613–618. [DOI:10.32598/ijvm.18.4.1005422]

Ploeg, M., Gröne, A., Saey, V., de Bruijn, C. M., Back, W., & van Weeren, P. R., et al. (2015). Esophageal dysfunction in Friesian horses: Morphological features. *Veterinary Pathology*, 52(6), 1142–1147. [DOI:10.1177/0300985814556780] [PMID]

Smiet, E., & Kolk, J. V. D. (2013). Equine oesophageal dysfunction. *Equine Veterinary Education*, 25(6), 287–289. [DOI:10.1016/j.cveq.2016.11.004] [PMID]