

## Effects of Body Positioning on Videofluoroscopic Barium Esophagram in Healthy Cats

**Authors :** Hyeona Kim, Kichang Lee, Seunghee Lee, Jeongsu An, Kyungjun Min

**Abstract :** Contrast videofluoroscopy is the diagnostic imaging technique for evaluating cat with dysphagia. Generally, videofluoroscopic studies have been done with the cat restrained in lateral recumbency. It is different from the neutral position such as standing or sternal recumbency which is actual swallowing posture. We hypothesized that measurement of esophageal transit and peristalsis would be affected by body position. This experimental study analyzed the imaging findings of barium esophagram in 5 cats. Each cat underwent videofluoroscopy during swallowing of liquid barium and barium-soaked kibble in standing position and lateral recumbency. Esophageal transit time and the number of esophageal peristaltic waves were compared among body positions. Transit time in the cervical esophagus (0.57s), cranial thoracic esophagus (2.5s), and caudal thoracic esophagus(1.10s) was delayed when cats were in lateral recumbency for liquid barium. For kibble, transit time was more delayed than that of liquid through the entire esophagus in lateral recumbency. Liquid and kibble frequently started to delay at thoracic inlet region, transit time in the thoracic esophagus was significantly delayed than the cervical esophagus. In standing position, 60.2% of liquid swallows stimulated primary esophageal peristalsis. In lateral recumbency, 50.5% of liquid swallows stimulated primary esophageal peristalsis. Other variables were not significantly different. Lateral body positioning increases entire esophageal transit time and thoracic esophageal transit time is most significantly delayed. Thus, lateral recumbency decreases the number of primary esophageal peristalsis.

**Keywords :** barium esophagram, body positioning, cat, videofluoroscopy

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