Post-operative outcome of dogs and cats treated surgically for traumatic diaphragmatic rupture: 43 cases (2009–2016)

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OBJECTIVES

To determine the possible pre-operative, intra-operative and post-operative variables which would affect the outcome of patients that underwent surgical correction for traumatic diaphragmatic rupture (TDR). The outcome was measured as post-operative oxygen requirement and complications, duration of intensive care unit (ICU) stay and discharge.

METHODS

Medical records and surgical reports of 36 cats and 7 dogs treated surgically for TDR between 2009 and 2016 were retrospectively reviewed to evaluate association between measured outcome and variables including signalment, clinical signs and duration before admission, pre-operative management and blood test, duration from admission to surgery and intraoperative data including anaesthesia, size of lesions and organs involved.

RESULTS

Median and mean time for stay in ICU was 29.5 and 37.7 hours, and animals with larger rupture (over 3 cm) were associated with a longer ICU stay ($p=0.04$, OR 2.83). Mean and Median time to discharge was 72 and 84.8 hours. Liver herniation ($p=0.031$, OR 2.35) and surgery within 24 hours of admission ($p=0.036$, OR 0.428) were associated with longer stay in hospital before discharge. Pancreas herniation ($p=0.04$) was associated with higher chance of complications. PIP (Peak-Inspiratory Pressure) and intra-operative hypotension were suggestive but not significantly associated with post-operative oxygen requirement.

STATEMENT

Results from 43 animals that underwent surgery within 24 hours of admission or with liver herniation suggested a longer hospital stay, rupture over 3cm was associated with longer stay in intensive care unit. Pancreas herniation was associated with higher rate of overall complications.