Anaesthetic management for dogs treated surgically for brachycephalic syndrome: preliminary study

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OUTLINE

EXPERIMENTAL METHODS

CONCLUSION

Boa group had significantly higher body temperature in comparison to control group of brachycephalic dogs that underwent surgery not related to BOAS (P = 0.029).

Internal diameter of endotracheal tube was significantly smaller in Boa group (P < 0.001) and control group of brachycephalic dogs (P = 0.002) in comparison to non-brachycephalic dogs. But there was no significant difference in endotracheal tube size between Boa group and control group of brachycephalic dogs.

The time of extubation after general anaesthesia was significantly longer in Boa group compared to non-brachycephalic dogs (P < 0.001) and control group of brachycephalic dogs (P = 0.029).

LITERATURE


ACKNOWLEDGEMENTS

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RESULTS

BOAS group had significantly higher body temperature in comparison to control group of brachycephalic dogs that underwent surgery not related to BOAS (P = 0.029).

Internal diameter of endotracheal tube was significantly smaller in BOAS group (P < 0.001) and control group of brachycephalic dogs (P = 0.002) in comparison to non-brachycephalic dogs. But there was no significant difference in endotracheal tube size between BOAS group and control group of brachycephalic dogs.

The time of extubation after general anaesthesia was significantly longer in BOAS group compared to non-brachycephalic dogs (P < 0.001) and control group of brachycephalic dogs (P = 0.029).

(exclude)

Age (month)  Weight (kg)  Dogs n (Br/#)  Temperature (°C)  HR (bmp)  ID endotracheal tube (mm)  Exaltation time min after end of surgery  Duration of anaesthesia (min)

<table>
<thead>
<tr>
<th></th>
<th>median (IQR)</th>
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<tbody>
<tr>
<td>FB</td>
<td>6.0 (5.0 - 7.0)</td>
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<tr>
<td>BST</td>
<td>7.0 (6.0 - 8.0)</td>
<td>7.0 ± 0.0</td>
<td>7.0 (6.0 - 8.0)</td>
<td>7.0 ± 0.0</td>
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<tr>
<td>Pug</td>
<td>8.0 (7.0 - 9.0)</td>
<td>8.0 ± 0.0</td>
<td>8.0 (7.0 - 9.0)</td>
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<tr>
<td>BOAS group</td>
<td>14.0 (13.0 - 15.0)</td>
<td>14.0 ± 0.0</td>
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Guidelines to choose the endotracheal tube size in dogs are based on normal body weight. However, these guidelines cannot be used for brachycephalic dogs, which is consistent with our findings that the internal diameter of the endotracheal tube was significantly smaller in all brachycephalic dog breeds.

Thus, we can assume that difficult breathing in certain brachycephalic dogs is mainly caused by airway obstruction by soft tissue rather than tracheal diameter. This was confirmed by the markedly improved breathing of brachycephalic dogs after nose and soft palate surgery.

The severity of respiratory and gastrointestinal signs were positively correlated in French bulldogs, males, and heavy brachycephalic dogs.

Because of the respiratory and associated gastrointestinal problems, all dogs undergoing surgical treatment for brachycephalic syndrome should receive gastroprotection drugs and antimetics before and for at least 10 days after surgery to prevent vomiting, regurgitation, and aspiration pneumonia.

It is important that the anesthesiologist allow for a longer recovery time after anaesthesia in brachycephalic dogs and not overbook anaesthesia times.

When a brachycephalic dog is treated surgically for brachycephalic syndrome, an even longer recovery time is expected.