

Anaesthesia in feral cats undergoing neutering: effects of three different surgical positions on haemoglobin oxygen saturation and intraocular pressure

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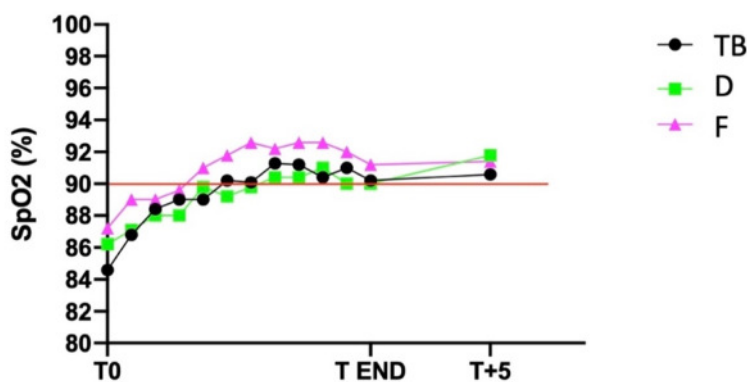
Female cats' neutering is performed in Trendelenburg, dorsal or lateral recumbency. Surgical positions effects on SpO₂ and intraocular-pressure (IOP) in anaesthetised cats were evaluated.

244 wild Romanian female cats were enrolled and randomly allocated to Trendelenburg (TB = 82), dorsal (D = 76) and flank (F = 86) groups. Anaesthesia was induced with medetomidine (30 – 50 µg kg⁻¹), ketamine (7 – 10 mg kg⁻¹) and butorphanol (0.4 mg kg⁻¹) IM.

Following preparation, after one minute in lateral recumbency (LR), baseline measurements (T0) were recorded: SpO₂ + PR, IOP and repeated after one minute in surgical position (T1), at the end of surgery (T End) and after another 5 minutes in LR (T +5). During surgery every minute SpO₂ and PR were recorded.

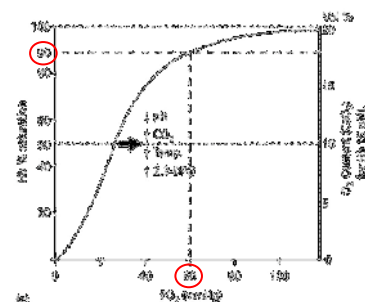
To determine effect of group and time a generalised additive mixed model was used.

There was no difference between the groups regarding duration of surgery, SpO₂ or PR but SpO₂ increased with time (Fig 1). IOP was significantly higher in TB end of surgery (mean 31 ± 6 mmHg, individual max. 48 mmHg), versus D+F (17 ± 4 mmHg), but normalised after 5 mins in LR. Cats' positioning during neutering has no influence on SpO₂ or PR. IOP is elevated in TB. Incidence of SpO₂ < 90 % was high, oxygen supplementation is advocated.



Oxy-haemoglobine dissociation curve

SpO₂ < 94% moderate hypoxia
SpO₂ < 90% severe hypoxia



T0 = Baseline; T0 -TEnd = SpO₂ at 1 min intervals during surgery, T-End = End of surgery; T+5 = 5 mins after end of surgery

Fig 1: Mean SpO₂ over time for each group

NetAP-Switzerland dose chart based on body weight

Kg	Ketamine ml (100 mg/ml)	Medetomidine ml (1 mg/ml)	Butorphanol ml (10 mg/ml)
1	0.1	0.05	0.04
1.5	0.15	0.08	0.06
2	0.2	0.1	0.08
2.5	0.25	0.1	0.1
3	0.3	0.1	0.12
3.5	0.3	0.12	0.14
4	0.3	0.15	0.16
4.5	0.35	0.15	0.18
5	0.35	0.15	0.2