

Anesthetic Protocol For The Surgery On A Chimpanzee (Pan troglodytes)

M Baigorria

Citation

M Baigorria. *Anesthetic Protocol For The Surgery On A Chimpanzee (Pan troglodytes)*. The Internet Journal of Veterinary Medicine. 2003 Volume 1 Number 2.

Abstract

An anesthetic protocol was designed for a 19 year-old mature male chimpanzee whose anesthetic risk was classified as ASA 3. His body weight was 65 kg. The scheduled surgical intervention was an amputation of the opposed finger of the right inferior extremity due to osteomyelitis caused by trauma with partial exposition of the phalange. The infection was approximately 10-12 days old.

CASE REPORT

Premedication was carried out through a dart injection. 300mg tiletamine-zolazepam was administered intramuscular (i.m.). After 10 minutes, the animal could be transferred to the presurgery room (very good muscular relaxation).

An intravenous catheter n° 20 gauge was placed in the left ulnar vein and an infusion was initiated with physiologic solution 0,8% at 10 ml/ kg/hr. Local infiltration was carried out with lidocaine 2% in the tarsus at the level of the malleolus (nervus tibialis anterior) and plantar (n. fibularis profundus and n. plantaris internus) of the affected extremity.

Induction was performed with intravenous (i.v.) propofol 1mg/kg and midazolam 0,1 mg/kg.

Endotracheal intubation was performed with a rect branch laryngoscope and endotracheal tube n° 8 for assisted respiration. Protocol was planned for maintenance of anesthesia (parenteral anesthesia). A butorphanol infusion was initiated at 10g/kg/hr. Bradypnea was noticed and assisted ventilation initiated.

The hemodynamic function remained stable, with light bradycardia at the beginning of the surgical intervention. The intrasurgical measures are shown in Table 1.

Figure 1

Table 1: Intrasurgical values

Time	Heart rate (beats/minute)	Arterial pressure (mmhg)	Respiratory frequency	Observations
11:00	120	150/80	12	Initial values
11:45	100	140/80	9	
11:50	80	130/80	6	Largest amplitude in respiratory pattern
12:15	82	130/70	4	Endotracheal intubation
12:30	80	130/70	4	Assisted breathing
12:50	80	130/65	6	Assisted breathing Liquid infusion: 20ml/kg/h Physiological solution 0.8 %
13:05	80	130/70	10	Good respiratory dynamics. Spontaneous breathing
13:20	80	130/70	10	End of surgery.
13:45	95	140/85	12	Corneal reflex+++ Palpebral reflex++ Swallowing reflex (-)

The intrasurgical antibiotic therapy was carried out with metronidazol (20 mg/ kg) and ciprofloxacin. The postoperative hemodynamic and respiratory recovery was uneventful.

The patient received ketorolac (0,3 mg/kg) i.m. every 12 hours. Ciprofloxacin was prescribed for 10 days orally. The slow recovery from anesthesia was intentionally to avoid removal of the protective bandages (slow tiletamine and butorphanol elimination). Twelve hours after surgery the patient recovered completely. Seventy-two hours after surgery, the bandages were changed and the wound looked good. The animal was tranquilized with ketamine (4 mg/kg.) i.m. for the dressing change.

References

1. Lumb & Jones, veterinary anesthesia , third edition, chapt. 2: 6-34, chapt. 3, chapt. 4, chapt.8, chapt.10:242-251,217-289, Williams- Wilkins, 1996.
2. La Motte C. Distribution of the tract lissauer and the dorsal root fibers in the primate spinal cord J.Comp Neurol 172:529, 1977.
3. Berkley KJ. Spatial relationships between the terminations of somatic sensory and motor pathways in the rostral brainstem of cats and monkeys. J. comp neuronal 193:283, 1980.
4. Muir W.;Veterinary anesthesia, third edition. Chapt. 4: 41- 49, chapt.8:302-309, 2000.,
5. Dr. Paladino, Bases farmacológicas de la anestesia;chapt.1: 98- 107, chapt.2: 109-122, 128-129,(1994)
6. Victor and AnnieReinhardt, Enviromental enrichment for caged rhesus macaques, animal welfare institute, Washington,D.C., 2001.
7. Botana, Landoni, Jimenez; Farmacología y terapéutica Veterinaria, , cap.12:148-157, cap.14:169-182. Editorial Mc.Graw Hill Interamericana, 2002.
8. Netter F.; Atlas anatomía humana, 2° edición,edit.Masson (1999).
9. Rohen J.,Yocochi C., Lütjen E., Anatomía humana, atlas fotográfico 4° edición, Harcourt Brace (1998)

Author Information

M.V. Luis Jimenez Baigorria

Facultad de Ciencias Médicas, Universidad.Nacional.de Cuyo