

Standing Sedation for Corneal Surgery in Horses: Retrospective Review of 19 Cases

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General anesthesia for ophthalmic procedures carries risks in horses. Standing sedation would offer an alternative but is mainly described for non-corneal procedures. Medical records from the National Veterinary School of Toulouse (2022–2024) were reviewed. Inclusion criteria were horses undergoing corneal surgery under standing sedation. Collected data included patient demographics, surgeries and durations (Figure 2), sedation protocols (Figure 1), complications. Descriptive statistics were applied. Results are expressed as mean \pm SD [min – max].

Nineteen horses were included ($19 \pm 8,7$ [2.5–31.5] years old, $506 \pm 163,4$ [90–680] kg). The sedation protocol included alpha-2-agonist \pm acepromazine \pm morphine. Multimodal analgesia was performed with NSAIDs and locoregional anesthesia:

- Topical oxybuprocaine 0.4% (1 mL)
- Retrobulbar block (7–10 mL), auriculopalpebral, infra-trochlear, lacrimal, and frontal nerve blocks (1.5 mL each) zygomatic nerve block (2.5 mL) of lidocaine 1%, bupivacaine 0.25%, adrenaline 5 μ g/mL

Anesthesia and surgery lasted 100 ± 36 [52–180] and 61 ± 28 [15–124] minutes. Minor complications occurred in five horses. One with untreated Cushing's disease had transient severe nystagmus and ataxia. No postoperative complications occurred.

Figure 1: Standing sedation protocol

Figure 2: Types and duration of procedures

	Flunixin meglumine (19/19)	Acepromazine (16/19)	Morphine (7/19)	Alpha-2-agonists		
				Detomidine (12/19)	Romifidine (5/19)	Medetomidine (2/19)
Bolus (mg.kg ⁻¹)	1,1 IV	0,03 [0,03-0,04] IM 0,005 [0,003-0,015] IV	0,1 IV	0,01 [0,005-0,015] IV	0,04 [0,02-0,06] IV	0,003 [0,003-0,003] IV
CRI (mg.kg ⁻¹ .h ⁻¹)	/	/	/	0,003-0,060	0,010-0,080	0,003-0,004

Surgery	Keratotomy	Keratotomy + graft	Keratotomy + graft + additional procedure
N	5/19	8/19	6/19
Duration (minutes)	$47 \pm 21,1$ [15-70]	$58,8 \pm 26$ [30-105]	$75,2 \pm 32$ [35-124]