

Standing Equine Sinus Surgery

Safia Z. Barakzai, BVSc, MSc, DESTS, MRCVS^{a,*},
Padraic M. Dixon, MVB, PhD, MRCVS^b

KEYWORDS

• Horse • Sinusitis • Surgery • Osteotomy • Trephination

KEY POINTS

- Trephination of the equine sinuses is a common surgical procedure in sedated standing horses.
- Standing sinus flap surgery has become increasingly popular and offers several advantages over sinusotomy performed under general anesthesia, including reduced patient-associated risks and costs and less intraoperative hemorrhage.
- Other minimally invasive surgical procedures for managing equine sinusitis include sinusoscopic surgery, balloon sinuplasty, and transnasal laser sinonasal fenestration.
- Regardless of the procedure used, appropriate indications for surgery, good patient selection, and familiarity with regional anatomy and surgical techniques are imperative to obtaining good results.

INDICATIONS FOR STANDING SINUS SURGERY

Standing sinus surgery is indicated in the horse to treat primary or secondary sinusitis (Tables 1 and 2). Sinus surgery is also performed for diagnostic reasons, such as to facilitate sinuscopy (direct sinus endoscopy), allow endoscopic-guided biopsy, or to collect samples of the sinus contents for bacterial or fungal culture or histology. Standing sinus surgeries can be divided into sinus trephination procedures and sinus flap surgery (osteoplastic flaps). Before performing either procedure, one must complete a detailed case investigation to confirm the presence of sinusitis, collect as much information as possible regarding the likely cause of the condition, determine which sinus compartments are involved, and establish the positioning of the most appropriate surgical site. Indications for sinus surgery are therefore based on the results of clinical examination, nasal endoscopy, skull radiography, and a detailed intraoral examination. If available, adjunctive advanced imaging techniques such as

Disclosures: The authors have no conflict of interests.

^a Chine House Veterinary Hospital, Sileby, Leicestershire LE12 7RS, UK; ^b Dick Vet Equine Hospital, Easter Bush Vet Centre, University of Edinburgh, Roslin, Midlothian EH25 9RG, UK

* Corresponding author.

E-mail address: szbarakzai@gmail.com

Vet Clin Equine 30 (2014) 45–62
<http://dx.doi.org/10.1016/j.cveq.2013.11.004>

vetequine.theclinics.com

0749-0739/14/\$ – see front matter © 2014 Elsevier Inc. All rights reserved.

Table 1		
Indications and contraindications for sinus trephination and standing sinus flap surgery		
	Indications	Contraindications
Sinus trephination	<ol style="list-style-type: none"> 1. Sinoscopy 2. Placement of a lavage tube 3. Endoscopic fenestration of the ventral conchal bulla^{10,16} 4. Sinoscopically guided sinus surgery (eg, for mass biopsy, removal of inspissated pus, conchal bone sequestrae, small sinus cysts, fungal plaques, formalin injection, or removal of small intrasinus progressive ethmoidal hematoma) 	<ol style="list-style-type: none"> 1. Bone opacity mass immediately beneath the proposed trephine site
Standing sinus flap surgery	<ol style="list-style-type: none"> 1. Primary sinusitis unresponsive to or recurrent after conservative management (antibiotics, sinus trephination, and lavage) 2. Intrasinus mass diagnosed preoperatively (eg, sinus cyst, ethmoidal hematoma, neoplasm) 3. Inspissated pus present within the sinus (diagnosed with radiography and/or sinuscopy); cases can sometimes be treated sinusoscopically using transendoscopic biopsy forceps or wire retrieval baskets 4. Sinonasal fistulation, occasionally indicated in cases of chronic sinusitis with obstruction of the nasomaxillary ostium; however, effective removal of the primary lesion from all compartments will usually reduce mucosal inflammation in these cases and allow normal drainage within a few days postoperatively (see section on minimally invasive techniques) 5. Depressed maxillary or frontal bone fractures, which require elevation and fixation or small fragments that need to be removed 	<ol style="list-style-type: none"> 1. Unsuitable patient temperament, particularly if sinonasal fenestration is likely to be required 2. Bone opacity intrasinus masses detected radiographically (eg, odontogenic tumors, osteoma); these are likely to require aggressive sectioning using chisels or bone saws to enable their removal, and this is often not well tolerated in sedated horses 3. Extraction of cheek teeth through repulsion, unless oral extraction has already been attempted with significant breakdown of the periodontal ligament; repulsion of firmly attached teeth is not tolerated in the standing horse and should not be attempted

scintigraphy, computed tomography (CT), or magnetic resonance imaging (MRI) may be indicated before surgical procedures are performed.

Endoscopy Per Nasum

The tortuous, slit-like nature of the nasomaxillary aperture in normal horses prevents direct examination of the paranasal sinuses using endoscopy per nasum. However, nasal endoscopy is required to confirm that the sinuses are the source of nasal discharge, and thereby rule out other causes of unilateral nasal discharge, such as

Download English Version:

<https://daneshyari.com/en/article/2458904>

Download Persian Version:

<https://daneshyari.com/article/2458904>

[Daneshyari.com](https://daneshyari.com)