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Letters to the Editor

Training model for endoscopic sinus surgery using lamb's head

To the Editor,

Re: The paper entitled "Evaluation of resident's training for endoscopic sinus surgery using a sheep's head" DOI 10.1007/s00405-015-3877-3881.

We read with a great interest article by *Delgado-Vergas B. et al.* published in European Archives of Otolaryngology [1]. Still, for the appropriate informing the readers, we need to comment on some points in this paper. First, we do feel that Delgado-Vergas article misses more precise data on the surgical anatomy of the sheep's head. Our first step, eighteen years ago, when we started with lamb's head model, was detailed studying of the lamb's head surgical anatomy in cooperation with the academic staff of the Department of Anatomy at the Veterinary Faculty in Zagreb [2]. Second, during two decades of the experience with the lamb's head, we do know that it offers the possibility of training not only septal surgery, middle antrostomy, ethmoidectomy and frontal sinus most anterior and most medial chamber presentation, but also more demanding and advanced procedures in human endoscopic sinus surgery (ESS) such as endoscopic endonasal orbital decompression [3], Draf 1, 2 and 3 procedures [4], cerebrospinal fluid (CSF) leak repair, including the nasoseptal flap [5], and endonasal endoscopic dacryocystorhinostomy [6]. Besides, eight years ago a special head holder was projected by an architect, and later on produced by Karl Storz, Germany. We are very satisfied with this head holder since it allows the surgical approach to the lamb's head not only through the nostrils, but also from all around the head including from above and from downwards. It has the simple mechanism for changing the position of the head during the dissection. Our holder allows palpating the medulla oblongata through the foramen magnum as to identify the movements of the brain when presenting it during the CSF leak repair.

Regarding the relationship between the orbital and nasal cavity, there is no danger of making any damage to lamina papiracea during the ethmoidectomy since orbital cavity in lamb and other quadrupeds has practically nothing to do with the nasal cavity!

The usual instruments for the ESS dissection in the man, which are used also during the trainings on the lamb's head, are long enough to reach the deepest points in the nasal and sinus cavities in lamb's head. We found sheep's head to big, so in very many cases it was not that easy, or it was even impossible to perform procedures like orbital decompression or CSF leak repair on the sheep's head. On the contrary, when dealing with the lamb's head it is always possible.

In our opinion, the lamb's head is smaller than sheep's one and thus more appropriate and effective and user-friendly model for gaining the essential surgical skills before going for the human cadaveric dissection. It serves also for getting the dexterity and the ability of the simultaneous use of the endoscope in one hand and various instruments in the other one.

Compliance with ethical standards

Conflicts of interest The authors declare no conflicts of interest to disclose.

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Sincerely,

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