

Dysphagia due to kyphosis-induced positional changes of the carotid artery

We have recently encountered numerous patients with age-related aberrations of the carotid artery [1–4]. This pathological condition is also a suspected risk factor for ischemic stroke [2–4] and has not been identified during previous physical examinations [3, 4].

A 78-year-old man was referred to our otorhinolaryngology clinic because of an unusual, strange sensation in his throat with dysphagia. The sensation had continued for 1 week. He had a history of dilated cardiomyopathy and had been taking warfarin to prevent arterial coagulation and other medications for the treatment of hypertension and atherosclerosis. His height, which had previously been 173 cm, was 168 cm at the time of our examination as a result of cervical kyphosis associated with ageing. The patient's neck had shortened because of habitual forward bending of the head, and that posture was associated with height loss.

Using a new folding pharyngeal scope [5], we found an aberration of the internal carotid artery in the left posterior pharyngeal wall. The pulsing of the aberrant artery was synchronized with the patient's heartbeat (see [Video 1](#), which was taken with the new pharyngeal scope). The unusual strange sensation around the pharynx resulted from a separation of the pharyngeal wall, which contains the mucosa, submucosa, and superior pharyngeal constrictor muscle, because of the aberration of the internal carotid artery. When he was lying in the supine position without a pillow, the patient's bent posture disappeared and the aberration of the internal carotid artery in the posterior wall of the pharynx also resolved so that the artery was completely enclosed within the parapharyngeal space. When the patient returned to the seated position, the arterial aberration recurred. Magnetic resonance angiography had not



Video taken with the new folding pharyngeal scope showing an aberration of the internal carotid artery in the left posterior pharyngeal wall; the pulsing of the artery was synchronized with the patient's heartbeat. When the patient was lying in the supine position without a pillow, his bent posture disappeared and the aberration of the internal carotid artery in the pharyngeal wall resolved completely.

detected any aberration of the internal carotid artery.

In the treatment of previous patients with the same condition, approximately 2–3 months after the strange sensation was noted, the internal carotid arteries became rigid in their aberrant positions, even in the supine position without a pillow, although the sensation disappeared completely [3, 4].

The new pharyngeal scope is an effective diagnostic tool in such cases.

Endoscopy_UCTN_Code_CCL_1AB_2AB

Competing interests: None

Koichi Tsunoda^{1,2}, Takeshi Wakabayashi², Junzo Takeda³

¹ Department of Artificial Organs and Medical Device Creation, National Hospital Organization, Tokyo Medical Center, Tokyo, Japan

² Department of Otolaryngology, National Hospital Organization, Tokyo Medical Center, Tokyo, Japan

³ National Hospital Organization, Tokyo Medical Center, Tokyo, Japan

Acknowledgments

Funding from AMED, Japan is gratefully acknowledged.

References

- 1 Tsunoda K, Takanosawa M, Matsuda K. Aberrant internal carotid artery in the mouth. *Lancet* 1997; 350: 340
- 2 Tsunoda K, Sakai Y, Kikkawa YS et al. Bent (head-down) posture and aberrant internal carotid artery in the mouth. A new risk factor for stroke? *Ann Intern Med* 2003; 139: W56
- 3 Suto Y, Tsunoda K, Chong T et al. Common but critical sensation in older adults. *J Am Geriatr Soc* 2011; 59: 1963–1964
- 4 Tsunoda K. Research Group on the Relationship of Bent Posture and Stroke, National Hospital Organization (NHO). Height loss caused by bent posture: a risk factor for stroke from ENT clinic – is it time to reconsider the physical examination? *Acta Otolaryngol* 2011; 131: 1079–1085
- 5 Tsunoda K, Sekimoto S, Tsunoda A. Novel diagnostic device for oral and pharyngeal examinations of children: folding-scope for the oral and pharyngeal cavities. *BMJ Case Rep* 2010. DOI: 10.1136/bcr.06.2008.0309

Bibliography

DOI <http://dx.doi.org/10.1055/s-0042-116024>
Endoscopy 2016; 48: E300
 © Georg Thieme Verlag KG
 Stuttgart · New York
 ISSN 0013-726X

Corresponding author

Koichi Tsunoda

Department of Artificial Organs and Medical Device Creation, and Department of Otolaryngology National Hospital Organization Tokyo Medical Center 2-5-1 Higashigaoka, Meguro-ku Tokyo 152-8902 Japan
 Fax: +81-3-34110185
 tsunodakoichi@kankakuki.go.jp