

The “secondary middle turbinate”: a case report of a misleading endoscopic finding*

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Abstract

Background: The “double middle turbinate” is an uncommon anatomical variant derived from the uncinate process.

Methodology: We present the case of a patient in which we observed this variant.

Results: An 80-year-old man presented with a history of left-sided nasal obstruction and facial pain. Upon endoscopic assessment and computed tomography imaging, an unusual anatomical configuration of the ostiomeatal complex, giving the appearance of a “double middle turbinate” was noted.

Conclusions: The knowledge and identification of this variant may avoid it to be confused with a pathologic process.

Key words: turbinates, paranasal sinus diseases

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Case:

♂,
80 years

Nasal obstruction (left)

Facial pain

Endoscopy & CT

Right nasal cavity

S : septum
I : inferior turbinate
M : middle turbinate
E : ethmoid bulla
U : uncinate process
* : “secondary middle turbinate”

Variant identified

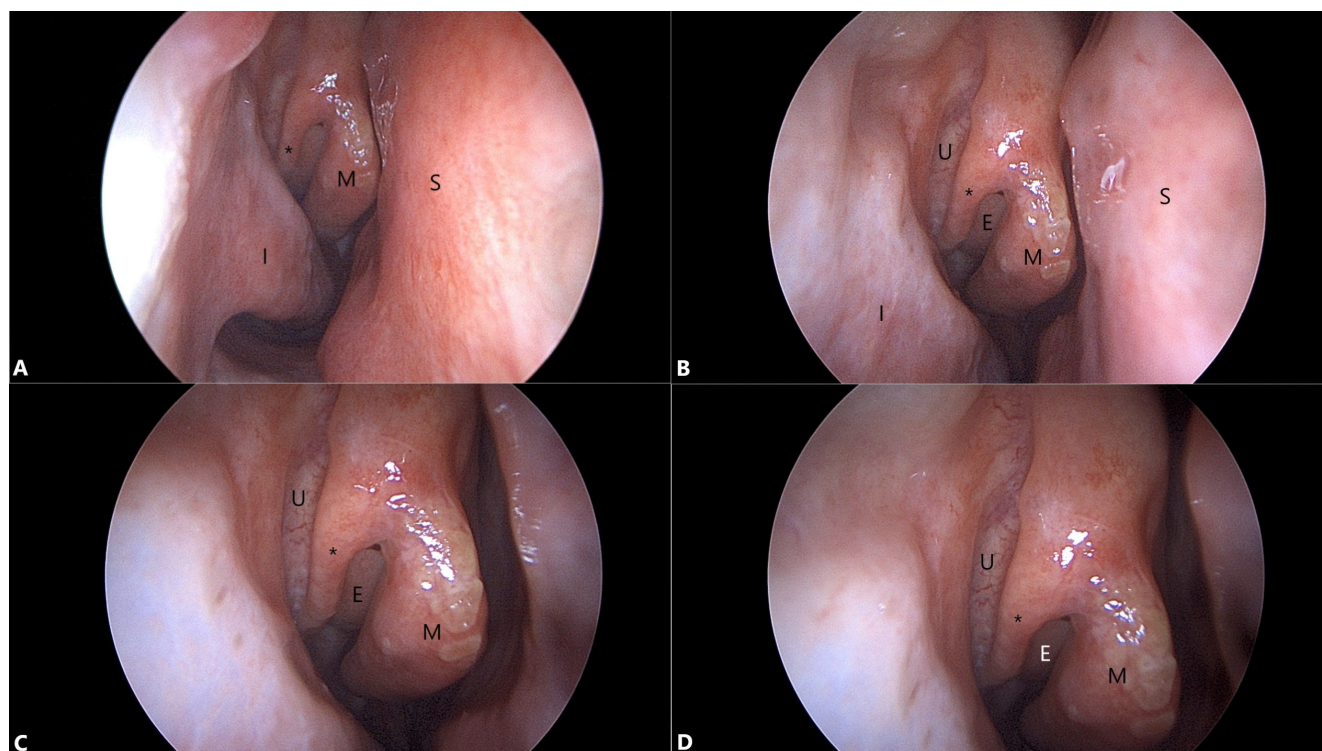


Figure 1A-D. Right nasal cavity endoscopy. S: septum; I: inferior turbinate; M: middle turbinate; E: ethmoid bulla; U:uncinate process; *: “secondary middle turbinate”.

Introduction

The “double middle turbinate”, first described by Kaufmann ⁽¹⁾, is an uncommon finding with vague descriptions in the relevant literature according to its origin ⁽²⁻⁴⁾. Despite its endoscopic appearance, this configuration is not derived from the middle turbinate, but from the uncinate process, which is abnormally bent medio-inferiorly thus protruding into the middle meatus ^(2,4) and its proposed anatomical nomenclature is “everted uncinate process” ⁽⁵⁾.

Methods

We present the case of a patient in which we observed this uncommon anatomical variant.

Results

An 80-year-old man presented with a history of left-sided nasal obstruction and facial pain. Upon endoscopic assessment, a unilateral unusual anatomical configuration of the ostiomeatal complex on the right side was noted, characterized by a medio-inferiorly bent uncinate process, giving the appearance of a “double middle turbinate” (Figure 1). A cone-beam CT scan revealed signs of diffuse chronic rhinosinusitis and provided a radiological depiction of this rare variant of the uncinate process (Figures 2, 2bis, 3, 3bis).

Discussion

The knowledge and identification of this variant may avoid it to be confused with a pathologic process, especially in cases with inflamed mucosa or nasal polyps and are paramount to avoid the common pitfalls of functional endoscopic sinus surgery. The CT scan in our case revealed modest signs of diffuse chronic rhinosinusitis. However, the functional relevance of this variant with respect to these alterations, as well the patient’s symptoms, is likely negligible since they are bilateral and there are no radiological signs of significant obstruction of the ostiomeatal complex nor significant fluid levels within the paranasal sinuses.

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Authorship contribution

Conceptualisation: BNL, writing original draft preparation: TM, supervision: BNL, writing-reviewing and editing: BNL. Both authors read and approved the final manuscript.

Ethics approval and consent to participate

No ethics committee approval was required for the publication of this case report.



Figure 2, 2bis. Cone beam CT (coronal slices) depicting the anatomy of the uncinate process.

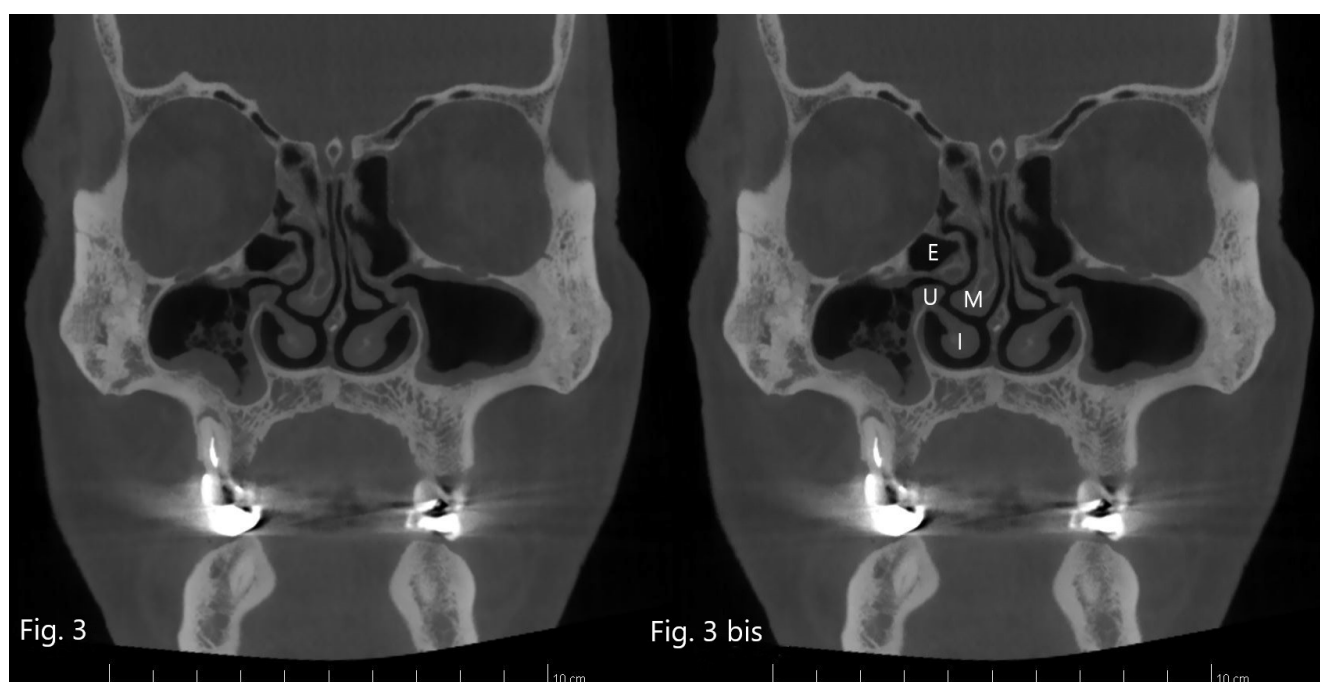


Figure 3 and 3bis. Cone beam CT (coronal slices) depicting the anatomy of the uncinate process.

Consent for publication

Written informed consent for publication of their clinical details and clinical images was obtained from the patient. A copy of the consent form is available for review by the Editor of this journal.

Conflict of interest

The authors declare that they have no competing interests.

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