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CLINICAL PHOTOS

70° endoscope examination of the ostiomeatal unit

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In our clinical practice we are dealing a lot with patients with chronic rhinosinusitis and it is mandatory to have an accurate diagnose in order to establish the proper therapeutic approach. We usually rely on a correct anamnesis, a rigorous nasal endoscopy performed with a 0° or 30° endoscope and a CT scan in order to get a correct therapeutic indication.

There are some cases in which we decide to per-

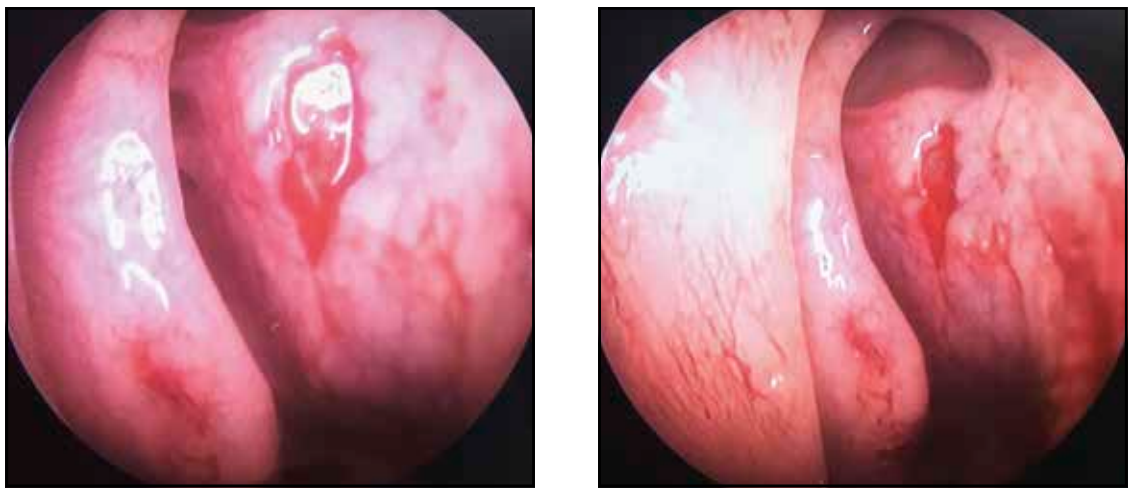

Figure 1 Right OMU - uncinate process, ethmoidal bulla, suprabullar cell.

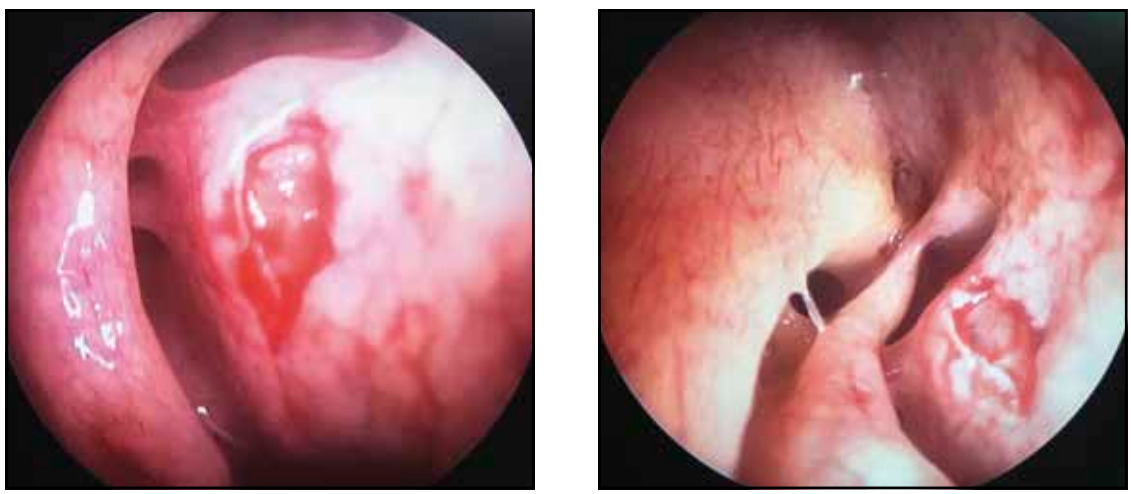

Figure 2 Hiatus semilunaris, uncinate process attachment, frontal sinus ostium.

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form a functional endoscopic sinus surgery in order to obtain a normal sinus drainage and ventilation. So, what we suggest in this paper is to perform, before any surgical step, a thorough examination of the middle meatus, especially when we decide to perform an endoscopic approach on the frontal sinus. We examine with a 70° endoscope all the anatomic landmarks of the ostiomeatal unit in order to get a clear view for a functional endoscopic surgical approach.

In a patient with frontal chronic inflammation, we began the examination of the middle meatus on the right side with a 70° endoscope in order to find the anatomic endoscopic landmarks. After medialization of the middle turbinate, we visualized the uncinate process, the first lamella in endoscopic sinus surgery, the ethmoidal bulla and in between the hiatus semilunaris. At a closer look upwards, we could completely see the opening of a suprabullar cell and the decision of a complete anterior ethmoidectomy could be easily taken in order to fulfill the endoscopic approach of the frontal sinus (Figure 1).

We continued very carefully our examination with the 70° endoscope in order to see all the landmarks and to perform a surgical approach without any complications. We examined the hiatus semilunaris, focusing on the anterior ethmoidal drainage systems, which guided us in opening the ethmoidal cells. The next step was to examine the superior and anterior part of the ostiomeatal unit, and especially the frontal recess. This part was the key-stone of our endoscopic exam because we visualized the suprabullar cell with no communication with the frontal sinus, the superior attachment of the uncinate process on the cribriform plate, the frontal recess anterior to the uncinate process with the frontal ostium partially covered by the uncinate process (Figure 2).

The 70° examination of the right ostiomeatal unit was useful in performing the endoscopic surgery and avoiding complications in many ways:

- it showed the exact dimension of the uncinate process in order to decide the size of uncinectomy;
- it revealed the anterior ethmoid drainage system in order to perform a correct ethmoidectomy;
- it pointed out the exact position of the suprabullar cell in order not to penetrate the cribriform plate trying to reach the frontal sinus;
- it visualized the attachment of the uncinate process on the cribriform plate, a very important landmark during uncinectomy;
- finally, it highlighted ~~on~~ the position of the frontal recess and the frontal ostium, anterior to the uncinate process (very rare position), in order to perform a correct endoscopic approach of the frontal sinus.

In conclusion, when dealing with frontal sinus pathology, we suggest performing, prior to surgery, an endoscopic examination of the ostiomeatal unit with a 70° endoscope for a precise surgical approach with no complications.