

# Endoscope SinuLift(ESSL)

<For camlogconnect member>

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## <Objective>

Sinus lift is a surgery that has many advantages if the deep area of the sinus can be seen directly, but is usually done blindly.

It is impossible for dentists to actually visualize the membrane in real-time. It is also difficult to see and take care of the deep area of the sinus when we lift the maxillary sinus membrane.

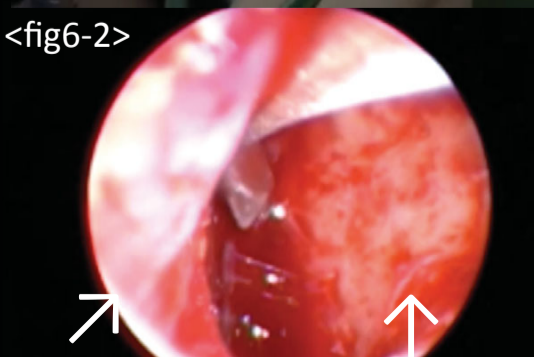
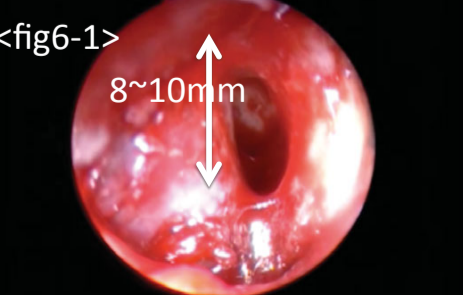
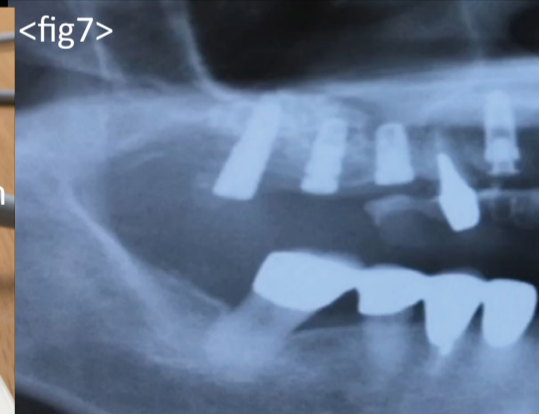
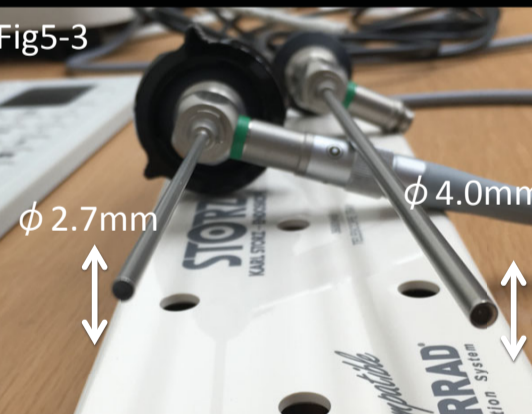
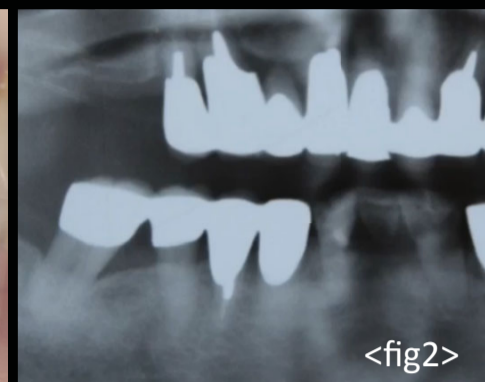
The endoscope allows us to directly see and elevate the membrane. Sinus augmentation and simultaneous implant surgery was performed on #16 and 17. Endoscope (KARL STORZ,  $\phi$  4.0mm and  $\phi$  2.7mm) was used to observe the maxillary sinus membrane and to augment the sinus. By using the endoscope, it helps us to directly see and safely elevate the maxillary sinus membrane.

## <Materials and Method>

Patient was 64y woman who lost #16,17 teeth. (fig1,and fig2) A small round lateral window ( $\phi$  8~10mm diameter) was made in the right maxillary bone using a Piezo surgery device.(fig3) An endoscope camera (KARL STORZ,  $\phi$  4.0mm) was inserted into the window.(fig4) The sinus membrane was lifted by directly observing through the endoscope monitor.(fig5-1,5-2,5-3) By changing the camera tip ( $\phi$  2.7mm camera), a camera was placed into the deep part of sinus and the membrane was lifted. (fig6-1,and fig6-2)

## <Results>

Sinus augmentation can be done more quickly and safely because we can actually visualize what is going on in the sinus, and the anatomical structures can be observed using the endoscope camera. (fig7) Due to direct visualization deep inside the sinus, we are able to see the structure of the sinus. The endoscope may allow a quicker and safer sinus lift surgery.



A small round lateral window

Sinus membrane

Sinus floor

## <Conclusion>

Because conventional sinus lift surgery is done blindly, it may seem like the deep part of the sinus membrane may be difficult to lift. Using an endoscope and inserting it to a small access hole from the lateral window, safe and minimally invasive sinus augmentation is possible. The difficulty of using an endoscope may be using a monitor to see what is being done. The actual surgery is done without seeing sinus directly, but through a monitor. Therefore, additional training is necessary before applying this technique to patients. In this day and age, using a device to actually see the sinus and perform a sinus lift helps the surgery go smoother without any surprises and may be a better service for our patients. More study and research are needed for safe sinus lift surgery.

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