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Introduction

We are familiar with the use of balloon angioplasty and arterial stenting in cardiology, and the results for coronary artery disease have been proven over the last decade.

Similar technology has progressed into use in sinus surgery, and sinusitis patients can now have their narrow sinus openings dilated with a balloon. This new technique of Balloon Sinuplasty™, which was invented in the US by Acclarent Inc., has been proven to be safe and is associated with reduced bleeding and shorter hospitalization. The level of postoperative care is reduced as there is no pain or bleeding and nasal packing is not required. Patients are able to return to work or go for a holiday the very next day after the procedure.

A computerized tomography (CT) scan is performed before the operation to assist the surgeon in diagnosing sinusitis and detecting abnormalities.

The balloon is inserted into the sinus with the guidance of fluoroscopy, which is similar to the cardiac angiogram. However, the radiation exposure is comparatively low, as most ENT surgeons with previous sinus surgery experience will be able to insert the balloon with minimal use of fluoroscopy.

Prerequisites

Balloon Sinuplasty is indicated in patients with a history of persistent discolored nasal discharge and facial pain. A CT scan is essential for proving the diagnosis and delineating the inner structures of the nose, as these can also act as a guide for the balloon. This imaging can be performed either in the patient's country of residence or in Malaysia, but hard or soft copies of the CT scan should be presented at consultation.

Patients on medications that can potentially cause excessive bleeding, such as anticoagulants or antiplatelets, can be contraindicated, although the procedure involves minimal bleeding compared to conventional endoscopic sinus surgery.

Procedure

Patients undergoing Balloon Sinuplasty will be admitted in the morning following a simple and brisk preoperative review, consisting of an endoscopic examination in the clinic. Upon admission to the ward, preanesthesia assessment is conducted, and the procedure is performed in the late afternoon after a minimum fasting period of six hours.

The total operating time does not exceed two hours and on average the procedure is completed within 45 minutes, inclusive of anesthesia induction and reversal.

All of the equipment used in the procedure is of a high standard and quality, including Karl Storz camera systems and endoscopes and a Philips fluoroscopy system which are imported from Europe. The balloons are exclusively designed and manufactured in Menlo Park, California, under the patent of Acclarent Inc.

The balloon is inserted into each opening of the sinuses and dilated with minimal assistance of fluoroscopy. The dilatation process allows an almost immediate cure, as drainage function of the sinus is restored within seconds of balloon withdrawal.

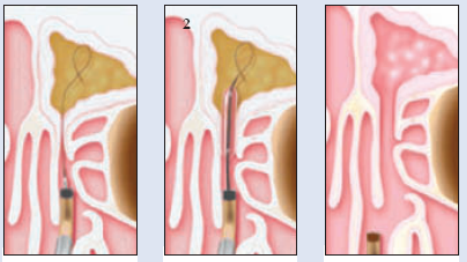
Postoperative complications are minimal, except for general anesthesia-induced drowsiness. Patients are able to eat, drink and walk within an hour of the procedure. Sometimes they are even allowed to go home after an observation period of up to six hours. However, one night's stay is recommended following the procedure, and if it is uneventful the patient is free to go home without any nasal pack.

Conclusion

Balloon Sinuplasty is a simple and effective procedure for treating sinusitis patients who have previously undergone unsuccessful endoscopic surgery. It requires minimal postoperative care and has no intraoperative complications, and is deemed to be suitable for travelling patients. MT

Diagram showing Balloon Sinuplasty

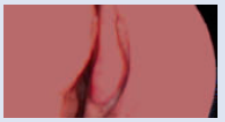
[Adapted from www.acclarent.com]



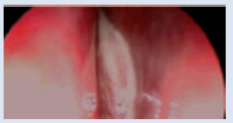
Guide catheter is inserted with the balloon inside.

Balloon is pushed out into the entrance of the sinus.

The sinus opening is dilated.

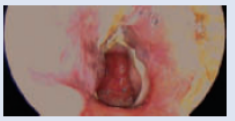


Healthy nasal cavity with healthy mucosa and wide cavity.



Acute sinusitis showing inflamed mucosa with pus discharge from sinuses.

Nasal polyposis within the nasal cavity is also an indication for Balloon Sinuplasty.



Chronic sinusitis with thick pus discharge, which is beginning to form a crust.