Weil Blakesley forceps

Balasubramanian Thiagarajan

Stanley Medical College

Introduction:

This versatile instrument plays a vital role in endoscopic sinus surgery and endoscopic skull base surgical procedures. Major advantage of this instrument is the feel it gives to the surgeon's hand when tissue is held between its jaws. Despite several modifications of the original design the basic concept of the instrument has managed to remain the same.

The design:

The instrument is conveniently angled so that the tip could be visible to the surgeon at all times without the hand of the surgeon obscuring it. The length of the instrument is about 120 mm which is convenient enough for it to reach the structures within the nasal cavity. It is slim with a tapering tip and a tight mouth. The size of the jaw is between 2mm – 4mm in size. This instrument comes in the following angulations:

1. Straight
2. 45 degrees
3. 90 degrees

Uses:

1. Used extensively in endoscopic sinus surgical procedures in removing loose fragments of bone and tearing soft tissue.
2. It can be used to punch a hole in the bulla ethmoidalis. By opening the jaw of the forceps after creating a punched hole the bulla can be entered.
3. Can be used in performing delicate skull base surgical procedures.

Caution:
1. The sharp end may tear into lamina papyracea / delicate skull base
2. It is better to hold loose bone fragments / soft tissue using the sides of the forceps jaw.
3. Extreme care should be taken while using this forceps to remove nasal mucosa as it could tear the mucosa causing bleeding / exposing too much of bone which lead to post op granulation tissue formation. It should be ensured that both jaws of the forceps clearly grasps the bony partition that needs to be taken down.
4. Extreme care should be exercised while using 90 degree Blakesley forceps because the tip may not be visible to the surgeon at all times. This could cause inadvertant damage to delicate structures of skull base if care is not exercised.
5. While removing nasal polypi, the polypoidal tissue should be grasped with the forceps and sustained pulling pressure should be applied to remove them completely. Normal tissue is highly resistant to this pulling, where as polypoidal tissue come out completely.

Modifications:
This forceps has various modifications to facilitate improved usage.

Thru cut modification: also known as Through cutting Mackay grunewald forceps. The tip of this forceps is sharp and can cut the soft tissue sharply. This causes a clean cut, less bleeding and helps in precision cutting. This modification is available even for angled forceps (45 degrees, and 90 degrees).

Blakesley forceps with suction attachment: Suction attachment is provided to Blakesley forceps. This enables the surgeon to have a dry field at all times during surgery.
Image showing Weil Blakesley forceps straight

Image showing Weil Blakesley forceps 90°
Image showing Weil Blakesley forceps 45°

Blakesley forceps straight in action
Through cut modification of Blakesley forceps

Blakesley forceps modified with attachment of suction facility