

Instructions For Use Of Crawford Lacrimal Intubation System

An Instruction Video And CD Rom Is Available Upon Request



Altomed Limited
2 Witney Way
Boldon, Tyne and Wear
NE35 9PE, England.
Tel: (0) 191 519 0111
Fax: (0) 191 519 0283

CAUTION

Separation of the Silicone Tubing from the probe may occur when intubating patients with severe blockage / narrowing of the lower naso-lacrimal duct or pronounced bony prominence. See Procedural Problems below.

GENERAL INSERTION INSTRUCTIONS

Check for any sharp edges. Each Punctum should be dilated. The lacrimal system is probed to open any blockages using a standard lacrimal probe such as a Bowman 00. It is suggested that successful probing be confirmed by inserting a second probe into the Inferior Meatus of the nostril and making the metal to contact metal.

Ease of passage of the probes through the Lacrimal System will vary widely from patient to patient with placement of the tubes in some patients being quite difficult due to narrow openings in the lacrimal system, especially at the lower end of the bony canal.

The Crawford Probe is passed through the Upper Punctum and across the Upper Canaliculus and then oriented down through the lacrimal system into the nose approximately 40mm (see Fig. 1). If any difficulties are experienced in locating the wire probe, a Bowman Probe may be used to establish metal to metal contact and define the position of the wire. **The Physician must keep lateral tension on the lid to avoid an accordion type effect on the Canaliculus, which increases the risk of perforating the epithelium and creating false passage**

The probe is located in the nose using the Crawford Retrieval Hook (Ref 28-0186). Note that the flat on the Hook Handle indicates the orientation of the hook in the nose. Those performing the procedure infrequently or for the first few times may have difficulty locating the probe in the nose. It is generally found more laterally and posteriorly than one would expect. If one pictures the junction of the lateral wall of the nose and the floor of the nose, the wire probes can usually be found by inserting the hook with the hook vertical so it follows this junction. The wire will be located lateral to the Inferior Turbinate in the Inferior Meatus of the nose. The wire is touched by the Hook and then engaged by rotating the Hook 90° in the direction of the wire. The probe is pulled back to nest the olive tip of the probe in the Hook. Using the Hook, the probe is pulled from the nose (see Fig. 1). Often a push / pull technique and some working of the hook with the wire will be required to complete the intubation. Refer to CAUTION at the top of this page and the paragraph titled Procedural Problems below. Care should be exercised to ensure the probe is pulled back so the olive tip is resting firmly in the hook.

The second probe is passed down the Inferior Canaliculus and out of the nose in a similar fashion.

As with any procedure, the Surgeon may encounter problems during a case. As previously mentioned, when the Lacrimal System is extremely tight and passing the wire probes is difficult, persistence and repeated probing is the only alternative.

Procedural Problems:

Occasionally the wire probe is passed and engaged by the hook but a significant resistance is noted. This may occur because the junction of the wire and tubing has become stuck at the lower end of the Naso-lacrimal Duct. In these cases the naso-lacrimal duct has a downward and slightly posterior direction and the wire has to be pulled around the bony prominence. Although the tubing is highly elastic and quite strong for its size, it is still much weaker than the wire and can be easily broken or stripped from the wire probe.

When significant resistance is encountered, the loop of an ear curette is slid over and down the wire pushing it posteriorly until the tubing is back in the nose and off the bony prominence (see fig. 3). The wire with the tubing attached is then worked around the bony prominence and pulled out of the nose.

All Intubation Systems Without Sutures

The original Crawford Intubation Set (without suture) is inserted in exactly the same manner as just described, however the tubing itself is tied and the knotted.

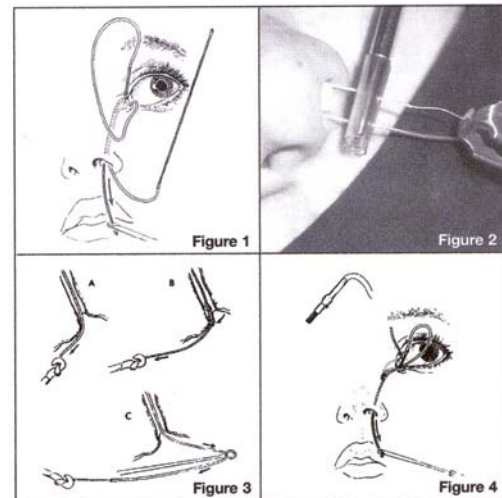
Form ALT I011 Issue 04/0307

The silicone tubing may be secured by a fine suture of the Surgeon's choice, for example 8-0 Silk. The knotted tubes are then tucked up

into the nose. Due to the bulk of the knot, it will not pass through the Canaliculus and the tubes must be removed through the nose. In older patients, it may be possible to expel the knot by having the patient blow their nose, but in small children it may require a second general anaesthetic to locate the knot and remove the tubes.

All Intubation Systems With A Suture

With the silicone tube in place, the wire probes are removed and the silicone tubes placed under slight tension using a clamp with tubing protected jaws (see Fig. 2). Using the Crawford Tubing Stripper (Ref 28-0184), the excess silicone tube is removed revealing the 6-0 silk suture (see Fig. 3). The suture is tied securing the tubes in place. Excess suture is removed and the clamp released, allowing the tubes to be located up in to the nose. The tubes are checked for tightness at the Medial Canthus and tension eased as required. Removal of the tubes is accomplished by locating the tube in the eye between the Upper and Lower Puncta and pulling the tubing upwards. The tubing is then cut and removed. The 6-0 silk suture may have to be removed separately from the tubes. This method of removal can be performed during an office visit and eliminates the need for a second anaesthetic during removal.



Post Surgical Problems

When using the original non-suture product, the large knot may occasionally be pulled up into the Lacrimal Sac. The Crawford Tubing Remover (Ref 28-0187) can be used in this situation. The remover is a probe similar to the ones supplied with the Crawford Sets but with an additional enlarged portion a short distance from the end of the wire. If a knot is pulled up into the Lacrimal Sac, locate the tubing in the eye and pull up on the tubing to create some slack. Feed the remover through the Lacrimal system alongside the tubing, locating it in the nose with a Crawford Hook. Position the remover so that the enlarged portion is just outside the Punctum. Cut the tube and feed the end of the tubing, which is now alongside the remover, onto the probe and over the enlarged portion of the remover. Carefully pull the remover out of the nose with the tubing. Work the knot back down and out of the Lacrimal Sac by gently pulling on the tubing (Fig. 4). Occasionally a patient may pull the tubing out from between the Upper and Lower Puncta. In this case the set should be removed. If desired a replacement set may be inserted in the normal manner.

The Remover may be used in any situation where the Surgeon wishes to reattach a tube to a probe.

It is important to note that tearing may persist while the tubes are in place since they do not act as a passage for the tears.

Dispose of after use by following hospital approved procedures for contaminated devices.

