

## Hangman's knot in securing bypass tubes in endonasal dacryocystorhinostomy\*

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### SUMMARY

*We performed 15 cases of dacryocystorhinostomy endoscopically with an 86% success rate. Using a Hangman's knot, the bypass tubes were placed in a secure and lasting way.*

*Keywords: dacryocystorhinostomy, bypass tubes, Hangman's knot*

Endonasal dacryocystorhinostomy is currently the favored surgical management for epiphora caused by saccal and postsaccal stenosis. Avoidance of external scars without compromising results has given it the edge over the traditional external approaches (Metson, 1991). The technique can be performed endonasally, with the aid of a microscope or via an endoscope. Small diameter endoscopes provide excellent visualisation of the lacrimal sac, making the procedure safe, even in the presence of fibrosis from previous surgery (Metson, 1991). A fibrosed lacrimal sac, reduces the success rate (29%) compared to a normal or dilated sac (success rate: 82%) (Manor et al., 1994).

We have performed 15 cases of endonasal dacryocystorhinostomy to date, all of them endoscopically. In 13 cases (86.6%), there was complete success. Two cases still had occasional minimal epiphora, which was, however, markedly reduced after the procedure. The reported success rate from endonasal endoscopic dacryocystorhinostomy ranges from 75%-86%, similar to our results (Par et al, 1998).

A number of various bypass tubes are available. We commonly use Jones tube and very occasionally Crawford's tube.

A common complication, regardless of which type of bypass tube used, is slippage of knots (usually granny knots into 5-7). This can be quite troublesome in children, as they would need anesthesia to resecure the slipped knots. We have overcome this by using a Hangman's knot (Figure 1) to secure the bypass tube and found it to be more secure and lasting.

The knot can be made outside and pushed into the nasal cavity. We suggest routine use of this knot, which is simple to learn and perform.

### REFERENCES

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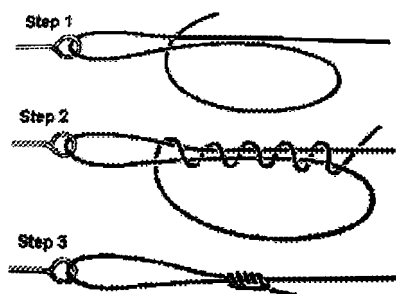


Figure 1. (Step by step illustration of a Hangman's knot).

Step 1: Bring the end back on itself, passing it under the doubled part

Step 2: Make 5 loops over the doubled part

Step 3: Tighten knot

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