

Introducing Gupta's needle: An indigenously made needle for frontalis suspension surgery for ptosis

R.C. Gupta

Professor & HOD, GSV Medical College, Kanpur, Uttar Pradesh

Email: rameshch.gupta@gmail.com

Abstract

Background & Objectives: *Wright's needle is used in Frontalis suspension surgery for correction of severe ptosis with poor levator function (congenital or acquired etiologies). It is not easily available and is costly for small setup. For this purpose we have introduced a locally manufactured needle.*

Methods: *We made a needle from a spoke of bicycle wheel.*

Results: *We have used it successfully for more than 25 years with no surgical hassles or complications. It was less time consuming.*

Conclusions: *Our needle is definitely a good alternative to wright's needle for frontalis suspension surgery.*

Introduction

Ptosis is not an uncommon condition to get in clinical practice. As oculoplastic surgeons and more over as comprehensive ophthalmologists, we understand that management of ptosis has always been a matter of controversy.

Different mode of surgeries and techniques have been used in the past and even today depending upon the cause of ptosis, the amount of ptosis and the amount of function of levator palpebrale superioris (LPS). Frontalis suspension surgery is now well-accepted as the procedure of choice for patients (congenital or acquired etiologies) with severe ptosis and poor levator function^[1]. Fascia lata is most commonly used material to anchor LPS with frontal belly of occipito-frontalis muscle^[2,3]. Non absorbable material as silicone rod/ sling or supramide suture may also be used.

In this procedure wright's needle is being used which is not easily available. Also it may be costly for small setup in an Indian scenario. For this purpose we have introduced a locally manufactured needle.

Material and Methods

The shape of indigenously made needle is very much similar to shoe-maker's needle (RAPI). An iron rod or a spoke of bicycle wheel was taken & made it round at one end in the form of a ring by coiling it and another same sized ring welded with the first to ease the grip (Fig. 1). Each ring has diameter of 3cm. Though it is not hard and fast as dimensions can be modified by the surgeon as per his/her ease of grip. The other end was made flat

and arrow shaped. Beveled part is 5-7mm long and 4-5mm wide at the broadest part. An eye is made at the pointed taper end behind the tip. It is 2mm wide and 3mm long. Total length of the needle is 12-15cm. Shaft is bend as per need, as shown in Fig. 1. Fasia lata strip/ silicone sling is put in the eye and easily passed from one incision to another inside the soft tissues finally anchoring the upper lid margins with the frontal belly of occipito-frontalis muscle as done in routine surgery.

We have used it successfully for more than 25 years. We face no surgical problem with the needle; instead it is convenient and less time consuming during the surgery. In cases coming for follow up no surgical complications were encountered.

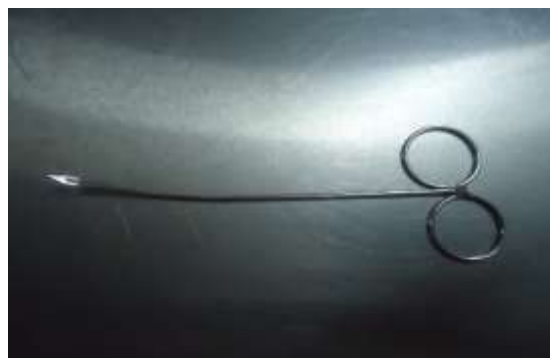


Fig. 1: Gupta's needle

Discussion

Wright introduced the needle that bears his name in 1922 for frontalis suspension using fascia lata. Various modifications have been tried to replace costly Wright's needle^[4,5]. We have also

successfully designed a home-made needle for the same.

Advantages of Gupta's needle:

1. Can be made locally.
2. Replaces costly Wright's needle.
3. In itself its cost is negligible.
4. In manufacturing no specifications are required.
5. The common iron tools are sufficient to manufacture it, no special machines required.
6. Since it is not a very fine tipped instrument, it can be sterilized very easily by autoclaving and hence reusable.
7. With this needle frontalis sling operation becomes very easy & takes very less time.

Result

As this indigenously made needle is not causing any inconvenience or hindrance in ptosis correction, moreover had many advantages of being cheap, made locally, easily manufactured and reusable. We recommend therefore this needle for ptosis correction in frontalis sling procedure in developing countries where costly setup and equipments are a matter of concern.

References

1. Berlin AI, Vestal KP. Levator aponeurosis surgery. *Ophthalmology* 1989;96:1033-1037.
2. Derby GS. Correction of ptosis by fascia lata hammock. *Am J Ophthalmol* 1928;11:352-354.
3. Crawford JS. Repair of ptosis using frontalis muscle and fascia lata. *Trans Am Acad Ophthalmol Otolaryngol* 1956;60:672-678.
4. Davi G, Modorati G, Brancato R. A disposable needle for frontalis suspension surgery in congenital ptosis. *Ophthalmic Surg Lasers* 1997;28:607-8.
5. M Alhady; C T Ngo; A K Tan; C N Chua. Use of 18-gauge intravenous catheter needle for frontalis suspension in children with congenital ptosis. *Eye* 2007;21:308-309.