

## Endoscopic Excision of Angular Dermoid in a Pediatric Patient: A Case Report

Rahul Kumar Gupta <sup>1,\*</sup>, Abhaya Gupta <sup>1</sup>, Paras Kothari <sup>1</sup>, Krushna Kumar Kesan <sup>1</sup>, Kedar Mudkhedkar <sup>1</sup>

<sup>1</sup>Department of Pediatric Surgery, LTMMC and LTMGH Sion, Mumbai, India

\*Corresponding author: Rahul Kumar Gupta, Department of Pediatric Surgery, LTMMC and LTMGH Sion, Mumbai, India. Tel/Fax: +91-9833112941, E-mail: drrahulg78@yahoo.co.in

Received: April 4, 2013; Accepted: July 2, 2013

A 10 year old boy presented with swelling on the temporal side of the left eyebrow since birth. With the diagnosis of angular dermoid, we chose subcutaneous endoscopic excision for its treatment, as direct excision of dermoid cysts of the eyebrow might have caused a prominent facial scar for him, which can be completely avoided with an endoscopic approach that places the incision in the hair-bearing portion of the scalp.

Keywords: Dermoid Cysts; Endoscopy; Pediatrics

### 1. Introduction

Subcutaneous swellings of the scalp, forehead and neck are commonly managed by an incision on the skin within the swelling (and along skin creases to hide the incision scar). No matter how fine surgical skills are, scarring is inevitable and becomes a cosmetically matter of concern for patients and parents (particularly scars over exposed parts of the body, such as face and neck) (1, 2). These concerns can be resolved by shifting the site of incision from an exposed location to a hidden area of the body, such as behind hairline for scalp swellings and axilla for neck swellings. This approach is also known as stealth surgery, as they allow us to perform relatively invasive procedures without leaving any obvious scar of an operation. There are few reports of using these approaches by plastic (3, 4), ENT (5) and maxillofacial surgeons (6). In this report, we have described using this approach for excision of an angular dermoid cyst.

### 2. Case Presentation

A 10 year old boy presented with swelling on the temporal side of the left eyebrow since birth (Figure 1 a). On examination, the swelling was 2 × 1.5 cm, cystic and mobile. He had no history of trauma. The result of skull X-ray was normal. With the diagnosis of angular dermoid, we decided to treat it by subcutaneous endoscopic excision. Patient's skull was shaved just above the hairline.

The procedure was performed under general anesthesia and endotracheal intubation. 500 mg Cefazolin was administered intravenously for preoperative wound infection prophylaxis. Patient's head was kept in lateral position. A 1.5 cm incision was made on the left temporal region just above the hairline. A plane was created subcutaneously with an artery forceps (Figure 1 b). Foley's catheter no. 8 was used as a dissection tool to carefully expand the subcutaneous space, aided by insufflations of balloon (Figure 1 c). With the initial surgical field created, 3 mm 300 telescope was inserted directly after manually lifting the eyebrow. The dissection was done with a 3 mm Maryland dissector and 3 mm hook electrode (Figure 1 d). The dissection was straightforward, as this space is largely avascular (Figure 2 a). Finger palpation on the skin was helpful to guide the dissection. Electro-cautery usage was avoided near skin. The most important aspect of stealth surgery is to create single large subcutaneous space rather than creating multiple tunnels. This makes instruments exchange and movements easier. The dermoid was removed intact (Figure 2 b). The incision was closed using 5-0 subcuticular suture. Postoperative compression dressing was given. It was removed in the evening and he was discharged on the same day with prescription of 300 mg acetaminophen twice a day for two days. On follow at day 7, he was absolutely alright (Figure 2 c). Histopathology was suggestive of angular dermoid.

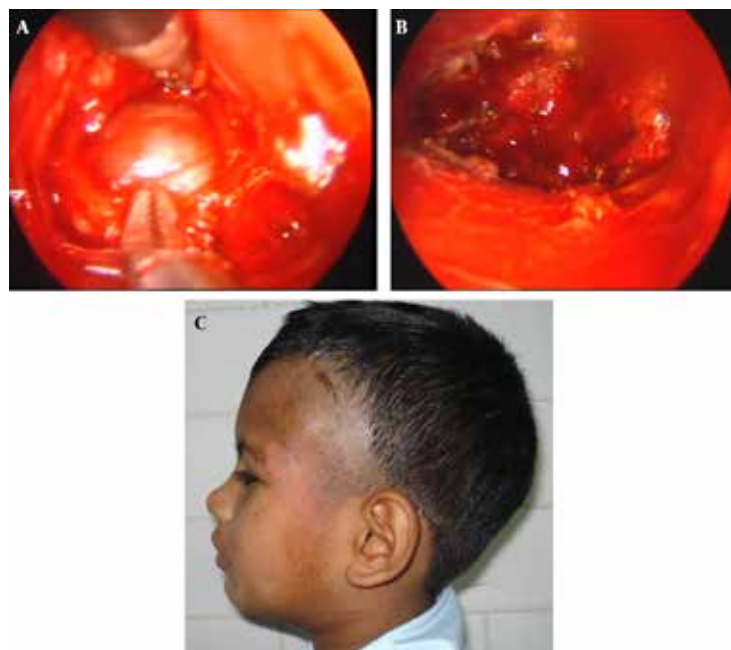
#### Implication for health policy/practice/research/medical education:

The stealth technique has the advantage of improved visualization of the cyst, greater precision of dissection, and excellent cosmetic results. One disadvantage is that this involves learning a new technique, while the majority of surgeons are more familiar with the open approach. However, basic laparoscopic skills are similar to this technique and competence can be easily achieved after training on a few cases.

Copyright © 2014, Minimally Invasive Surgery Research Center and Mediterranean & Middle Eastern Endoscopic Surgery Association. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.



**Figure 1.** A) Angular Dermoid Over Left Side of Eyebrow, B) Creation of Subcutaneous Plane With Artery Forceps, C) Expansion of Subcutaneous Space, Aided by Insufflations Of Balloon, D) Telescope With Working Ports



**Figure 2.** A) Showing Dissection of Dermoid, B) Post Excision Dermoid Bed, C) Postoperative Healed Wound Behind Hairline

### 3. Discussion

Dermoid cyst is most commonly located along the line of embryonic fusion (Outer third of the fronto-orbital region) (7). Conventionally, dermoid cysts are managed by making an incision on the skin overlying the swelling, which leads to formation of visible scar and disfiguration, along with long term psychosocial consequences. . In the literature, a new method for the excision of these cysts was described, in which one or two small incisions are made behind the forehead hairline and swelling was excised with endoscopic instruments. This is known as stealth approach and its advantages over conventional open approach are as follows: 1) a small hidden incision; 2) Avoiding injury to important structures by endoscopic assisted magnified view and 3) No disfigurement (7).

The stealth approach has the advantages of better visualization, finer dissection, and avoidance of disfiguration. The only disadvantage is the longer learning curve for surgeons than the open approach. However, it should be noted that just like any other operative technique -open, laparoscopic or stealth approach- excellence can be obtained after acquiring experience by operating few cases.

### Acknowledgements

None declared.

### Authors' Contribution

All authors contributed in management of patient as well as review of relevant literature and discussion writing.

### Financial disclosure

Authors have no financial interests related to the material in the manuscript.

### Funding/Support

There is no funding or support.

### References

1. Tebble NJ, Adams R, Thomas DW, Price P. Anxiety and self-consciousness in patients with facial lacerations one week and six months later. *Br J Oral Maxillofac Surg.* 2006;**44**(6):520-5.
2. Tebble NJ, Thomas DW, Price P. Anxiety and self-consciousness in patients with minor facial lacerations. *J Adv Nurs.* 2004;**47**(4):417-26.
3. Huang MH, Cohen SR, Burstein FD, Simms CA. Endoscopic pediatric plastic surgery. *Ann Plast Surg.* 1997;**38**(1):1-8.
4. Paige KT, Eaves FF, 3rd, Wood RJ. Endoscopically assisted plastic surgical procedures in the pediatric patient. *J Craniofac Surg.* 1997;**8**(3):164-8.
5. Steele MH, Suskind DL, Moses M, Kluka E, Liu DC. Orbitofacial masses in children: an endoscopic approach. *Arch Otolaryngol Head Neck Surg.* 2002;**128**(4):409-13.
6. Mulhern M, Kirkpatrick N, Joshi N, Vijh V, Coghlan B, Waterhouse N. Endoscopic removal of periorbital lesions. *Orbit.* 2002;**21**(4):263-9.
7. Guerrissi JO. Endoscopic excision of frontozygomatic dermoid cysts. *J Craniofac Surg.* 2004;**15**(4):618-22.