



POWER ASSISTED TRANSORAL ENDOSCOPIC VS CONVENTIONAL ADENOIDECTOMY- A COMPARISON

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ABSTRACT

To evaluate and compare the efficiency of Power Assisted Transoral Endoscopic (PATE) with the Conventional Adenoidectomy (CA). A prospective study involving 50 patients in which 25 underwent PATE and 25 underwent CA. The residual adenoid tissue at 3 months and 6 months after surgery were compared. Residual adenoid was less in PATE than CA, operating time was more in PATE than CA. There was no difference in operative blood loss and complications between the two methods. PATE is a safe and efficient way to do an adenoidectomy.

KEY WORDS: Power –Assisted Transoral Endoscopic Adenoidectomy, Conventional adenoidectomy, microdebrider Adenoidectomy.



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INTRODUCTION

Adenoids are the sub-epithelial lymphatic aggregation with the nasopharynx. Adenoid hypertrophy causing recurrent URTI, secretory otitis media, snoring and OSA is very common. Adenoidectomy is done for such patients either above or in combination with tonsillectomy or myringotomy. The widely used method of removing adenoids is conventional curettage method which is a blind method where the completion of the procedure is always a debate. Because of increased incidence of residual adenoid tissue post-operatively newer endoscopic techniques have evolved to help remove the adenoids under vision. Here is one such method where we use Power-assisted Transoral Endoscopic adenoidectomy and compare it with conventional adenoidectomy. The efficacy of the method was analysed by assessing the residual adenoid tissue after 3 and 6 months after surgery.

MATERIALS AND METHODS

A Prospective study of 50 children with adenoid hypertrophy undergoing adenoidectomy between January 2012 to January 2013 in Department of otorhinolaryngology, Sree Balaji Medical College and Hospital, Chennai, was done after approval from the ethical review committees. A total number of 50 patients were included in the study group, of which 25 patients underwent PATE and 25 patients underwent CA. The patients were randomly selected for the method of surgery. Patients presenting with complaints of mouth breathing, snoring, recurrent nasal discharge, nasal obstruction, cough and cold, ear infections were subjected for ear, nose and throat clinical examination. X-ray nasopharynx was taken to confirm the findings. Patients underwent either PATE or CA and selection was done randomly.

PATE METHOD

The patient was put in rose position. The soft palate retracted by passing the suction cannula in both nostrils, so as to create space between the soft palate and posterior pharyngeal wall. 70 degree nasal endoscope is passed through the oral cavity along with a curved microdebrider, so the adenoids could be removed under vision.

CONVENTIONAL ADENOIDECTOMY

The patient was put in rose position and Boyle-Davis mouth gag with suitable retractor. St. Claire Thompson adenoid curette is used to blindly curette the adenoids through the oral cavity. All patients were followed up for 6 months. Post-operative x-ray and endoscopy was done to evaluate the residual adenoid tissue in 3 and 6 months after the procedure.

The residual tissue after surgery was graded as

Mild: Residual adenoid tissue only above ET orifice / 1/3rd of airway narrowing in x-ray.

Moderate: Residual adenoid blocking ET orifice / 2/3rd of airway narrowing in x-ray.

Severe: Residual adenoid tissue extending beyond lumen and blocking choana/ total occlusion of nasopharynx.

Other parameters such as operative time, blood loss and complications were also compared.

OBSERVATION AND RESULTS

PATE was done in 25 patients (14 boys, 11 girls, mean age 4.5yrs, age ranges 3-12 years) and CA was performed in 25 patients (10 boys, 15 girls, and mean age 5.5yrs, age range 4.5-9 years) There was increased incidence of residual adenoid tissue in CA adenoidectomy after both 3 and 6 months of follow up compared to PATE.

RESIDUAL ADENOID TISSUE (RAT) AFTER 3 AND 6 MONTHS OF SURGERY

| RAT | PATE(25) | CA(25) |
|----------|----------|--------|
| MILD | 2 | 4 |
| MODERATE | 1 | 2 |
| SEVERE | - | 1 |
| | 3(12%) | 7(28%) |

The mean blood loss in CA was 42cc and in PATE was 50cc. The mean operative time in CA was 8 minutes and PATE was 15 minutes. The blood loss was equal, but the operating time increased in PATE. No complications were seen in both the methods.

DISCUSSION

The adenotonsillectomies has been the most frequent surgery done in ENT. Adenoid hypertrophy may cause recurrent nasal block, nasal discharge, mouth breathing, cough, throat pain (pharyngitis), snoring and OSA, secretory otitis media, dental caries, facial abnormalities etc, but tonsil causes throat pain and dysphagia. The main culprit in the disease is the adenoids than the tonsils, but proper importance is not given for adenoidectomy. Most techniques of adenoidectomy concentrate on removing predominantly the midline mass of adenoid tissue¹. The cervical vertebrae beneath the prevertebral fascia have a round contour. Adenoidectomy done using adenoid curette does not remove the adenoid tissue completely^{2,3}. In 1992, Becker et al reported endoscopic assisted adenoidectomy by using blakesley forceps piece by piece.⁴ Cannon et al in 1999 described Endoscopic-Assisted adenoidectomy according to this technique, at the end of a CA, both the nasal cavities and the nasopharynx were inspected with a 4mm 0 degree rigid telescope. Adenoid remnants with nasopharynx were removed under direct visualization by paediatric straight

forceps or pituitary forceps⁵. In our study, we used 70 degree nasal endoscopy through the oral cavity with curved blade a microdebrider after soft palate retraction to do adenoidectomy. Mosaad et al detected residual adenoid tissues after CA in 20.5% of cases that were subjected to endoscopic exploration⁶. In our study, we had 28% of cases of CA and 12% of PATE with residual adenoid tissue which is statistically significant.⁶

CONCLUSION

Transoral route provides us enough space to introduce the endoscope (to a degree) and microdebrider in contrast to Transnasal route in less than 10 yrs children. Power Assisted Transoral Endoscopic adenoidectomy is a safe, precise and effective method for the removal adenoidectomy and the only demerits is the necessity of powered instruments and endoscopy which are routinely used in nasal surgeries and available easily.

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