



## ENT

## A COMPARITIVE STUDY OF ADENOIDECTOMY BY MICRODEBRIDER AND BY THE CONVENTIONAL METHOD

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**ABSTRACT** **Introduction:** Adenoids are nasopharyngeal lymphoid tissue which are part of the Waldeyers ring. Adenoid hypertrophy can cause the child to have symptoms such as mouth breathing, ear infection due to eustachian tube blockage, adenoid facies and snoring. Traditionally adenoids are removed via blind curettage of adenoid tissues. However this method has complications, chances of residual tissue, eustachian tube injury and nasopharyngeal stenosis. Microdebriders are now used to remove adenoids as they allow proper visualisation of adenoid tissue. But microdebriders are costly and not easily available. Thus this study was performed to compare the two methods

**Aims and Objectives:**

- 1) Comparison of effectiveness adenoidectomy with microdebrider and with conventional method.
- 2) Comparing the time taken, blood loss, residual tissue left and injury to surrounding structures in both methods.

**Material and Methods:** 30 patients, with adenoid hypertrophy requiring adenoidectomy, coming to the ENT opd from jan 2022 to june 2022 were evaluated. The patients were randomly assigned into 2 groups- Group 1 - Adenoidectomy done by the conventional method, Group 2- Adenoidectomy done with a microdebrider. **Inclusion Criteria:** Age 3-14 years with symptoms **Exclusion Criteria:** Bleeding disorder, Velopharyngeal insufficiency, Immunocompromised state and URTI **RESULTS:** The average time taken for surgery in Group 1 was 30.21 mins and in Group 2 was 21.56mins. The average blood loss in group 1 was 35.13 ml and in group 2 was 21.31 ml. Residual tissue was left in 4 cases in group 1 and in no cases in group 2. There was injury to 2 patients in group 1 whereas there was no injury to surrounding structures in group 2. **Conclusion:** Adenoidectomy with microdebrider is a safer and an effective method for adenoidectomy however time taken and blood loss is more in it compared to the conventional method. The results were statistically significant.

**KEYWORDS :** Adenoid, Microdebrider, Adenoidectomy, Adenoid Hypertrophy

**INTRODUCTION**

Adenoids are nasopharyngeal lymphoid tissue forming a part of the Waldeyer's ring, they were initially described by Meyer in 1868<sup>12</sup>. Adenoids grow until the age of 4 after which they should begin to regress<sup>7,8</sup>. Failure to regress or hypertrophy of adenoids due to bacterial infection may cause certain pathological manifestations such as rhinitis, nasal obstruction leading to the children becoming "mouth breathers", adenoid facies, difficulty in breathing, sleep disorders and otitis media with effusion<sup>9,10</sup>. (Figure 1)

Adenoidectomy is one of the commonest procedures performed by an ENT surgeon usually along with tonsillectomy<sup>11</sup>.

It was first described in 1885<sup>12</sup>. Conventional adenoidectomy is usually a blind procedure performed by digital palpation of adenoids and removal by curettage.<sup>14</sup>

This procedure however comes with the major drawback of non-visualization of adenoids while removal. As it wholly relies on digital palpation by the surgeon to determine the completeness of surgery there are chances of residual adenoid tissue being left post surgery thus leading to recurrence of symptoms over time.

Dissatisfaction with the adenoid tissue removal and due to risk of injury to surrounding structures with the conventional method led to alternatives such as adenoidectomy using microdebrider<sup>15</sup>

The advent of endoscopes in 90s led to the complete visualisation of adenoid tissue and microdebriders thus being used for adenoidectomy. Canon et al popularized Endoscopic Assisted Adenoidectomy (EAA) calling it "a natural progression of endoscopic technology to allow a more complete adenoidectomy". They followed a conventional transoral adenoidectomy with endoscopic removal of adenoids.

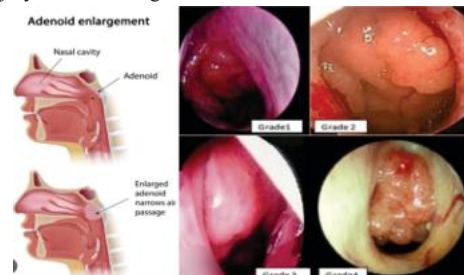
Recently powered shavers with endoscopic visualization have evolved as safe, accurate and complete adenoid removal technique with less operative time and less blood loss.

Keeping this in mind we undertook this prospective comparative study between conventional curettage adenoidectomy and adenoidectomy by microdebrider.

**Aims and Objectives**

- 1) Comparison of effectiveness adenoidectomy with microdebrider and with conventional method.

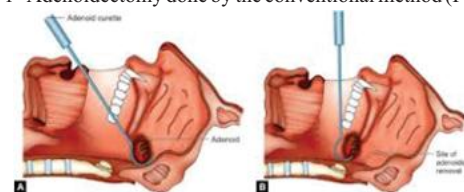
- 2) Comparing the time taken, blood loss, residual tissue left and injury to surrounding structures in both methods.



**Figure 1**

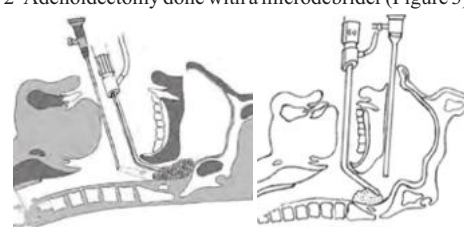
**MATERIAL AND METHODS**

30 patients, with adenoid hypertrophy requiring adenoidectomy, coming to the ENT opd from jan 2022 to june 2022 were evaluated. The patients were randomly assigned into 2 groups- Group 1 - Adenoidectomy done by the conventional method (Figure 2)



**Figure 2**

Group 2- Adenoidectomy done with a microdebrider (Figure 3)



**Transoral Visualisation Transnasal Visualisation**  
**Figure 3**

**Inclusion Criteria**

Age 3-14 years with symptoms

**Exclusion Criteria**

Bleeding disorder, Velopharyngeal insufficiency, Immuno-compromised state and URTI

**RESULTS**

**Study Design:** This was a prospective, randomized in which 30 patients were divided into 2 groups

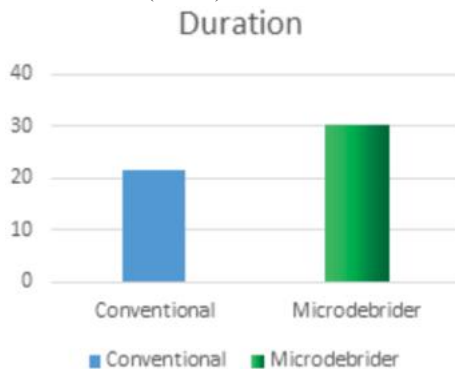
Group 1-Adenoidectomy with conventional method

Group 2-Adenoidectomy with microdebrider

The observations of the study were as follows

- Time taken for surgery-

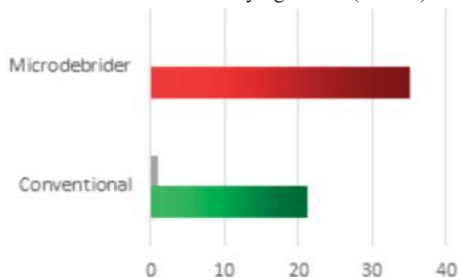
The average time taken for surgery in Group 1 was 30.21 mins and in Group 2 was 21.56mins. (Table 1)



**Table 1**

- Blood loss-

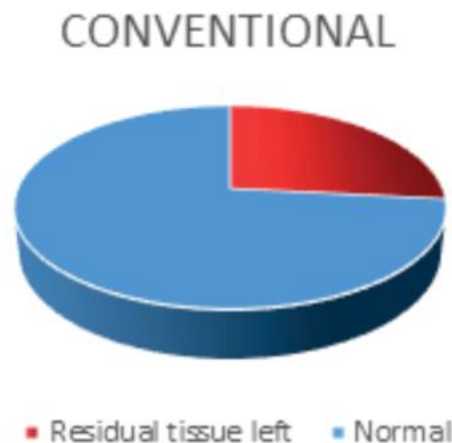
The average blood loss in group 1 was 35.13 ml and in group 2 was 21.31 ml. The results were statistically significant (Table 2)



**Table 2**

- Residual tissue-

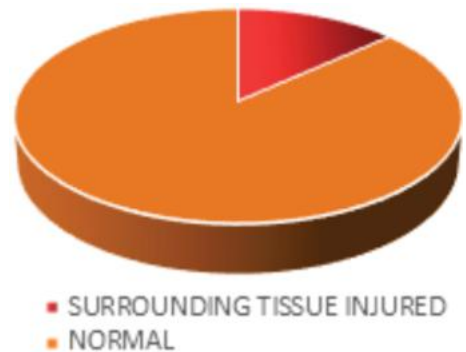
Residual tissue was left in 4 cases in group 1 and in no cases in group 2. (Table 3)



**Table 3**

- Injury to surrounding tissue-

There was injury to 2 patients in group 1 whereas there was no injury to surrounding tissue in group 2. (Table 4)



**Table 4**

**CONCLUSION**

Adenoidectomy with microdebrider is a safer and an effective method for adenoidectomy however time taken and blood loss is more in it compared to the conventional method. The results were statistically significant.

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