Peritonsillar Abscess: Is Incision Drainage Superior to Abscess Tonsillectomy?

Objective: To compare the post operative morbidity associated with incision drainage versus abscess tonsillectomy in the management of peritonsillar abscess by measuring the frequency of postoperative haemorrhage, severity of postoperative pain, duration of hospital stay and recurrence.

Study Design: Quasi experimental study.

Place and duration: ENT Department, Govt Lady Reading Hospital, Peshawar, over a period of three years.

Materials and Methods: The study included patients of either sex, aged between 15 to 40 years, presenting with peritonsillar abscess.

Patients were divided into two groups. Group I consisted of patients in whom incision drainage of abscess was done whereas in Group II, Abscess Tonsillectomy was Carried out. Patients were assigned to either Group by a Random Sampling Technique. The two groups were matched for age, gender, and duration of illness. All patients were preoperatively managed on indoor basis with intravenous fluid resuscitation, intravenous antibiotics and analgesics.

The various outcome measures included postoperative haemorrhage, postoperative pain, and duration of hospitalization and recurrence of abscess. All the patients were kept in the ward for observation and indoor management for a minimum of 24 hours postoperatively. Following discharge, follow up was done for up to three months to document any recurrence.

Results: In total of 60 patients were studied, of whom, 36 (60%) were males, and 24 (40%) females, Age ranging between 15 to 40 years. Secondary haemorrhage was observed among five patients after abscess tonsillectomy as compared to one patient with incision drainage. Two patients also developed reactionary haemorrhage after abscess tonsillectomy. Severe postoperative pain was also significantly frequent among patients where abscess tonsillectomy was employed. Duration of hospitalization was significantly more among patients with abscess tonsillectomy. Recurrence was observed among two patients with incision drainage while no recurrence in the patients with abscess tonsillectomy group.

Conclusion: The post operative morbidity associated with abscess tonsillectomy is comparatively higher than that associated with incision drainage. Therefore, incision drainage is superior and hence recommended for managing peritonsillar abscess.

Key Words: Peritonsillar abscess. Abscess tonsillectomy. Incision drainage.

Introduction

Peritonsillar abscess (PTA) is a common infection of the head and neck region. It begins superficially and progresses into the deep soft tissues. The exact mechanism of initial abscess formation is not known. Peritonsillar abscess is the collection of pus between the fibrous capsule of the tonsil usually at its upper pole, and the superior constrictor muscle of the pharynx. It is a common clinical presentation in otolaryngology practice. It mainly occurs in young adults and rarely in children. It can be recurrent disease in certain patients. Morbidity is due mostly to pain, and
Peritonsillar Abscess: Is Incision Drainage Superior to Abscess Tonsillectomy? Muhammad Habib et al

results increasing cost of treatment and working day loss. Peritonsillar abscess is usually polymicrobial when the drained pus is cultured. The most common aerobic species found are streptococcus especially Streptococcus pyogenes and most common anaerobic species found are Prevotella species and Peptostreptococcus. In addition to general measures, the various specific measures include incision and drainage of abscess, abscess tonsillectomy & needle aspiration.

The present study was undertaken to compare management outcomes in patients with peritonsillar abscess undergoing treatment with incision drainage versus abscess tonsillectomy and hence generate an evidence base to effect a meaningful change in our existing management practices.

Materials and Methods

This study was carried out in ENT Department, Govt Lady Reading Hospital, Peshawar, over a period of three years. All patients presenting with peritonsillar abscess were included in the study irrespective of their age and sex. Patients with history of bleeding disorders, respiratory tract infection and diabetes mellitus were excluded. Patients were divided into two groups. Group I consisted of patients in whom incision drainage of abscess was done whereas in Group II, abscess tonsillectomy was carried out. Patients were assigned to either group by a random sampling technique.

The various outcome measures included postoperative haemorrhage, postoperative pain, duration of hospitalization and recurrence. All the patients were kept in the ward for observation and indoor management for a minimum of 24 hours postoperatively. Following discharge, follow up was done for up to three months to document any recurrence.

In abscess tonsillectomy group, the surgical procedure was undertaken under general anesthesia while in the incision drainage group, the procedure was performed under local anesthetic (infiltration with 2% Xylocaine was used). All patients received management with IV fluids, coverage with broad spectrum antibiotics, analgesics, and antipyretics. All the patients were kept in the ward for indoor management for 24 hours postoperatively. Following discharge, follow up was done for up to three months to document any recurrence.

Data Analysis: The data were analysed through SPSS version 10 and various descriptive statistics were used to calculate frequencies, percentages, means and standard deviation. The numerical data such as age, and duration of hospitalization were expressed as Mean ± standard deviation while the categorical data were expressed as frequency and percentages. The difference between means was regarded as statistically significant if p-value was less than 0.05.

Results

In this study, abscess tonsillectomy was performed in 30 patients and an equal number of patients were managed with incision drainage. Out of 60 patients, there were 36 males (60%) while 24 females (40%). The patients ranged in age between 15-40 years. Presenting features among the patients included severe pain inside throat (n=60), fever (n=60), trismus (n=36), and dysphagia (n=32).

Out of 60 patients, 8 patients (13.3%) had postoperative haemorrhage, of which 5 had secondary haemorrhage and 2 reactionary haemorrhage in tonsillectomy patients while only one patient in the incision drainage group had secondary haemorrhage.

Severe postoperative pain was more frequent among patients in abscess tonsillectomy group as compared to patients in incision drainage group. All those with severe pain needed parental analgesics. Recurrence was observed in two patients of incision drainage group while none among patients of abscess tonsillectomy group.

Majority of the patients of abscess tonsillectomy group stayed in hospital for 48-72 hours, while only three patients having incision drainage stayed for over 24 hours.

Table I shows comparison of the various parameters among the two groups.

<table>
<thead>
<tr>
<th>Outcome Measures</th>
<th>Incision drainage group (n=30)</th>
<th>Abscess tonsillectomy group (n+30)</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Posoperative Haemorrhage</td>
<td>1</td>
<td>7</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>2 Hospital stay over 24 Hours</td>
<td>3</td>
<td>20</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>3 Recurrence within three month</td>
<td>2</td>
<td>-</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>4 Postoperative Pain Mild Moderate severe</td>
<td>28</td>
<td>5</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>5</td>
<td>&gt;0.05</td>
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Peritonsillar Abscess: Is Incision Drainage Superior to Abscess Tonsillectomy?  Muhammad Habib et al

Discussion

Management of peritonsillar abscess is often challenging. Patients are systemically unwell and hence patients need management as a whole, rather than management of the abscess alone. General management includes rehydration of patients with IV fluids, coverage with broad spectrum antibiotics, analgesics, antipyretics and care of airway.1,8,9

Majority of our patients presented with severe throat pain, fever, trismus, and dysphagia. The diagnosis is usually straightforward, based on history and throat examination. Newer techniques such as intraoral ultrasound in now increasingly used in the developed countries.10-13

We observed significantly higher frequency of post operative haemorrhage among patients with of abscess tonsillectomy group as compared to those in incision drainage group. Our findings are in conformity with what is reported in the published literature.1,2,14,15

Post operatively severe pain was more frequent among patients managed with abscess tonsillectomy. Hospital stay was also significantly longer among abscess tonsillectomy patients. Our results are in conformity with published literature.15-17

Recurrence was observed in two patients of incision drainage group in patients of abscess tonsillectomy group. Where as none reported in patients of abscess tonsillectomy. A recurrence rate of up to 10% has been reported in the published literature in relation to incision drainage for peritonsillar abscess.1,3,18,19

Our study has limitations. As this a hospital based study, it cannot give incidence and prevalence, however it highlights the most common presenting features of peritonsillar abscess and better outcome with the less invasive procedure of incision drainage. We suggest further studies to confirm and improve upon our results.

Conclusion

The post operative morbidity associated with abscess tonsillectomy is comparatively higher than that associated with incision drainage of the peritonsillar abscess. Therefore, incision drainage is superior and hence recommended for managing peritonsillar abscess.

References