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ORIGINAL ARTICLE

Comparative Effectiveness of Needle Aspiration Vs Incision and Drainage in Management of Peritonsillar Abscess

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ABSTRACT

Background: An accumulation of pus between the tonsil's fibrous capsule and the pharynx's superior constrictor muscle is known as a peritonsillar abscess.

Objective: To assess the Comparative effectiveness of Needle aspiration VS incision and drainage in management of peritonsillar abscess

Methodology: This randomized control trails was conducted at the Department of ENT, Bolan Medical College / Complex Hospital, Quetta from January 2023 to June 2023 after taking approval from the research committee of the institute. In the current study, totally 80 patients were enrolled and they were divided into Group A and Group B. Forty patients were enrolled in each group. 40 patients in group A received treatment by needle aspiration while Group B patients received treatment by incision and drainage. Data analysis was done using SPSS version 23. The data was described using descriptive statistics. The chi-square test was employed for qualitative variables and the independent sample's t-test for quantitative variables. A p-value of less than 0.05 was deemed significant.

Results: In the current study, totally 80 patients were enrolled and they were divided into Group A and Group B. Forty patients were enrolled in each group. The male patients in group A were 25 (62.5%) and female patients were 15 (37.5%). In group B, male patients were 23 (57.5%) and female were 17 (42.5%). On the basis of age and gender, patients in both the groups were almost similar (p=less than 0.05). In case of group A, 30 (75%) patients were successfully managed while in group B, 33 (82.5%) patients were treated successfully. In patients of group A, repeat drainage on day first was required in 8 (20%) while in group B it was required in 7 (17.5%) patients. In patients of group A, third procedure on day 2 was required in 2 (5%) patients while it was not required for any patients of group B on day second.

Conclusion: Our research showed that needle aspiration is a less invasive and similarly effective procedure in comparison to incision and drainage in the therapy of peritonsillar abscess.

Keywords: Effectiveness; Needle aspiration; Incision; Drainage; Peritonsillar abscess

INTRODUCTION

An accumulation of pus between the tonsil's fibrous capsule and the pharynx's superior constrictor muscle is known as a peritonsillar abscess (1). Since there is more loose areolar tissue at the top pole of the tonsil, this is where it frequently happens. The crypta magna and tonsillar capsule at the top of the throat are where infections commonly progress. The region first exhibits the symptoms of cellulitis, including redness and swelling. If left untreated at this point, the pus develops and the abscess spreads into the soft patate, peritonsillar region, and, in rare cases, the parapharyngeal area. Although the patient might not have had recurrent acute tonsillitis, Quinsy often affects healthy young adults who have a history of recurrent acute tonsillitis. A quinsy often begins with a sore throat that lasts for two to three days before becoming progressively worse and becoming unilateral. Quinsy is often unilateral, however it may also be bilateral on occasion (2). The history's primary features include a progressive, often unilateral sore throat that lasts for three to four days, odynophagia, solid and subsequently liquid dysphagia, drooling, trismus, ipsilateral otalgia, and headache that is linked to fever and ippsilateral lymphadenopathy. The thickening of the oropharynx and the buildup of saliva in the mouth cause the patient's voice to become distinctively "plummy." The patient seems sick, has a temperature, and often has severe trismus, according to the examination. An oropharyngeal evaluation reveals a remarkable asymmetry, with the tonsil on that side enlarged, hyperaemia, and dislocated, as well as oedema and hyperaemia of the soft palate. On the same side, there is additional cervical lymphadenopatty in the jugulodigastric area (3,4). The abscess pus culture reveals aerobic and anaerobic microbes. The first course of therapy for cellulitis include intravenous fluids, antibiotics, analgesics, and drainage if pus has developed (5-8). Incision and drainage with a traditional guarded quinsy knife under local anaesthesia are compared to the effectiveness of pus drainage by needle aspiration in this research.

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MATERIALS AND METHODS

This randomized control trails was conducted at the Department of ENT, Bolan Medical College / Complex Hospital, Quetta from January 2023 to June 2023 after taking approval from the research committee of the institute. In the current study, totally 80 patients were enrolled and they were divided into Group A and Group B. Forty patients were enrolled in each group. The research comprised 80 patients of either sex, ages 18 to 51, who arrived to the ENT OPD with a peritonsillar abscess. The research excluded individuals under the age of eighteen and those with diabetes. 40 patients in group A received treatment by needle aspiration with a 10 cc syringe on day 0 (first procedure), followed by repeat aspirations if necessary on days 1 and 2 (second and third procedures). Patients who still had an abscess after day 2 were cut and had it drained. Group B patients had a conventional number 12 blade incision and drainage of the abscess with guard on day 0 (first surgery), followed by peritonsillar forceps evacuation on day 1 (second procedure) if necessary. Examining the patient the day after the surgery allowed for the determination of progress; a decrease in supra tonsillar oedema, a reduction in discomfort, and an improvement in odynophagia were considered as indicators of improvement and the end of surgical efforts. Both groups' patients were admitted to the hospital and began receiving 1.2 gm of amoxicillin + clavulanic acid intravenously three times a day. They were then switched to taking 625 mg of amoxicillin + clavulanic acid tablets three times a day. Intramuscular 75 mg diclofenac sodium twice day was used to give analgesia for the first three days, and mefenamic acid tablets of 1000 mg were used three times a day after that. Every patient was administered mouthwash containing chlorhexidine. Data analysis was done using SPSS version 23. The data was described using descriptive statistics. The chi-square test was employed for qualitative variables and the independent sample's t-test for quantitative variables. A p-value of less than 0.05 was deemed significant.

RESULTS

In the current study, totally 80 patients were enrolled and they were divided into Group A and Group B. Forty patients were enrolled in each group. The minimum age of the patients was 18 years whereas the maximum age was 55 years. The mean age (SD) in patients of group A and group was 33.21 (±6.16) and 32.99 ((±8.11) years respectively. The male patients in group A were 25 (62.5%) and female patients were 15 (37.5%). In group B, male patients were 23 (57.5%) and female were 17 (42.5%). (Figure 1) On the basis of age and gender, patients in both the groups were almost similar (p=less than 0.05). In case of group A, 30 (75%) patients were successfully managed while in group B, 33 (82.5%) patients were treated successfully. In patients of group A, repeat drainage on day first was required in 8 (20%) while in group B it was required in 7 (17.5%) patients. In patients of group A, third procedure on day 2 was required in 2 (5%) patients while it was not required for any patients of group B on day second. (Figure 2)

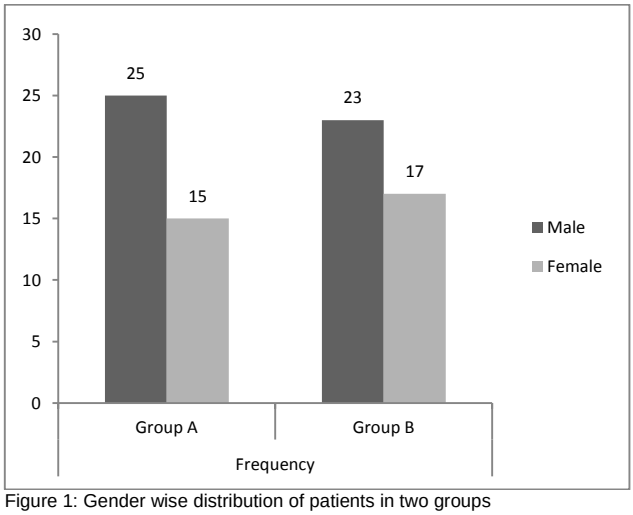

Figure 1: Gender wise distribution of patients in two groups

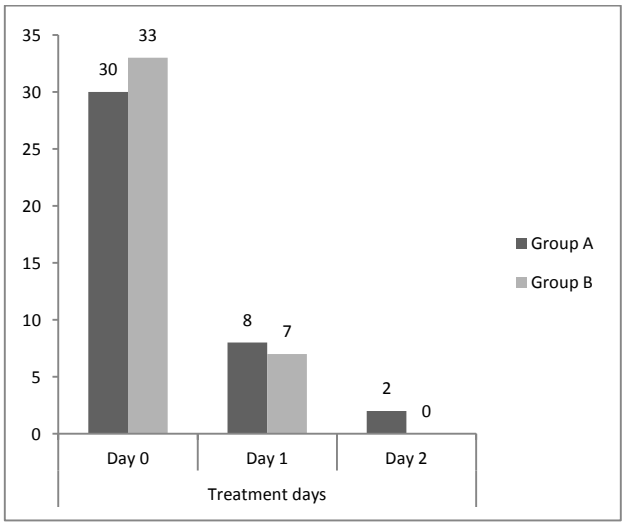

Figure 2: Treatment efficacy comparison of two groups

DISCUSSION

The most problematic symptom for an individual with a peritonsillar abscess is odynophagia. beyond the pus in a peritonsillar abscess is evacuated, throat discomfort usually goes away in 24 to 36 hours, but in instances of incision and drainage, the location of the incision becomes inflamed and continues to cause pain beyond 36 hours (1,3). The study's justification is that, unlike with needle aspiration, odynophagia subsides in around 24 hours after pus evacuation, but the incision site still hurts for an additional two to three days. As opposed to incision and drainage, needle aspiration does not worsen or prolong throat discomfort. It is also a useful technique for removing pus from peritonsillar abscesses, and the amount of pus during the first aspiration serves as a reliable indicator of whether re-aspiration is necessary (9). Because it avoids oral commensals from contaminating the sample, needle aspiration is also the most effective method for providing a sample for bacteriological examinations of the pus, which is useful in determining the antibiotic regimen (10). According to Fred et al., needle aspiration is currently the preferred technique for draining pus from the peritonsillar area because of its simplicity to apply and reduced risk of complications (11). According to several reports, the best technique for treating paediatric peritonsillar abscesses is needle aspiration (4). Up to 20% of patients may need repeated needle aspiration, which is not statistically significant in comparison to incision and drainage. However, the patient experiences pain relief much sooner with needle aspiration than with incision and drainage (12).In our study, in case of group A, 30 (75%) patients were successfully managed while in group B, 33 (82.5%) patients were treated successfully. In patients of group A, repeat drainage on day first was required in 8 (20%) while in group B it was required in 7 (17.5%) patients. In patients of group A, third procedure on day 2 was required in 2 (5%) patients while it was not required for any patients of group B on day second.

In the treatment of adult peritonsillar abscess, Dov et al. reported that needle aspiration was a viable substitute for incision and drainage as well as hot tonsillectomy (13). Comparing needle aspiration to incision and drainage, the quick symptom alleviation exceeds the low failure rate of this technique (14). In the treatment of peritonsillar abscess, Maharaj et al. reported that needle aspiration had statistically comparable success rates to incision and drainage (15). According to a meta-analysis carried out at the University of Michigan Medical School, needle aspiration is a safer treatment than incision and drainage or hot tonsillectomy (16) and is just as successful as incision and drainage in removing pus from peritonsillar abscesses. Today, needle aspiration is considerably safer and easier because to the use of a reciprocating process device (17).

CONCLUSION

Our research showed that needle aspiration is a less invasive and similarly effective procedure in comparison to incision and drainage in the therapy of peritonsillar abscess.

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