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Comparison of Sitz bath Alone Versus Sitz bath with Antibiotic Therapy in the Management of Uncomplicated Perianal Abscess

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[1,3,6]Substantial contributions to the conception or design of the work; or the acquisition, [4,5]Drafting the work or revising it critically for important intellectual content, [2]Final approval of the version to be published

Funding Source: None
Conflict of Interest: None

Disclaimer: This article is based on the dissertation of Dr Hafeezullah, postgraduate student, for FCPS in Surgery.

Received: Sep 09, 2023
Accepted: Dec 29, 2023

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ABSTRACT

Objective: To compare the outcome of sitz baths alone vs. sitz bath with antibiotic treatment in uncomplicated cases of perianal abscess.

Methodology: A prospective comparative clinical trial was carried out in Department of General Surgery Pakistan Institute of Medical Sciences (PIMS) Islamabad from January 2018 to December 2019. All uncomplicated cases of perianal abscess who underwent incision & drainage were included in the study. Patients were divided randomly in two groups: group A was advised to use sitz bath alone thrice daily, while group B was advised to use sitz bath along with antibiotics. Pain score was measured by Visual Analogue Score (VAS) and wound healing was assessed fortnightly. Data was recorded and analyzed using SPSS version 22. Standard deviation was calculated for quantitative variables like age and size of wound. Chi-square test was applied to compare pain and healing between two groups. P value ≤0.05 was taken as significant.

Results: A total of 147 patients were included, 72 patients in group A and 75 in group B. The mean age of the patients was 40.25±15.35 and mean wound size was 6.55 ± 2.45. The difference in pain score by VAS is not statistically significant (p=0.329) at follow up, while wound healing at fortnightly visit in group A (56, 77.77%) was more than in group B (47, 62.66%) with statistically significant difference (0.003).

Conclusion: The use of the Sitz bath alone showed significant results as compared to sitz bath with antibiotics in wound healing among patients with perianal abscess.

Key words: Antibiotics, Perianal abscess, Sitz bath, Wound healing.

Cite this article as: Hafeezullah, Waqar SH, Shah SA, Rashid I, Shahzad F. Comparison of Sitz bath Alone Versus Sitz bath with Antibiotic Therapy in the Management of Uncomplicated Perianal Abscess Ann Pak Inst Med Sci. 2023; 19(4):477-480. doi. 10.48036/apims.v19i4.936.

Introduction

Perianal abscess is one of the common anorectal conditions come across in practice that requires surgical treatment. Perianal abscess is a major concern for patients worldwide because it affects the quality of life.[1] All age groups may get affected, with peak incidence among 20 - 40 years old.[2] Prevalence in general population is much higher than seen in clinical practice because majority doesn't seek medical advice. Adult males are affected twice as compared to female.[3]

Perianal abscess is a common condition characterized by the collection of pus in the anal region. It is a clinical diagnosis. In general, perianal abscess is treated with early incision and drainage followed by Sitz baths and antibiotics. The surgical community remains divided on the necessity and efficacy of antibiotic therapy in the management of uncomplicated perianal abscess. Some advocate for a conservative approach with sitz baths alone, while others argue in favor of combining sitz baths with antibiotic treatment.[4] Aspiration with antibiotics is used as an alternative treatment option in some cases, but evidence for its effectiveness is limited.[4] There are studies showing that post-operative use of antibiotics is unnecessary in patients with perianal abscess.[5,6] Evidence is available that there is limited role of using antibiotics in postoperative cases in which either there is fistula formation or culture

positive cases.[7-9] A randomized trial by Sözener U did not detect the protective effect of antibiotic use in the treatment of perianal abscess. No statistically significant differences between groups were detected regarding gender, duration of symptom and other characteristics.[10] Another study demonstrated a positive effect of prophylactic antibiotics in treatment of perianal abscess; but the study was single centred and single blinded.[6]

A warm sitz bath is usually advised for pain relief in anorectal disorders; however, the mechanism of relieving pain by the sitz bath is unclear.[11] Although the effects of sitz bath on anal and rectal disease have not yet been proven, doctors are still prescribing sitz bath for patients with anal and rectal disease. The clinical effect of sitz bath was unknown from clinical observations.[12] Patients with anorectal disorders often improved and healed their wounds, regardless of whether they were on strict sitz bath therapy. Despite being a frequently encountered problem, there is a lack of consensus on the optimal management strategy, particularly regarding the use of antibiotics in conjunction with sitz baths. The study aims to contribute valuable insights into the most effective and evidence-based approach for managing uncomplicated perianal abscess, thereby enhancing clinical decision-making and patient outcomes. So far few studies have been conducted locally addressing the importance of sitz bath in perianal abscess.[13]

In summary, the proposed study addresses a pertinent clinical question surrounding the management of uncomplicated perianal abscess, seeking to clarify the optimal treatment approach by comparing the outcomes of sitz bath alone versus sitz bath with antibiotic therapy. The findings of this research have the potential to influence clinical guidelines and improve the overall care and outcomes for individuals with perianal abscess. The objective of the study is to compare the outcome of sitz baths alone versus Sitz bath with antibiotic treatment in uncomplicated cases of perianal abscess.

Methodology

The Research Paradigm of the Study was post positivism. A prospective comparative clinical trial was conducted from January 2018 to December 2019 at the Department of General Surgery, PIMS, Islamabad. Ethical approval was granted by the Ethical Review Board of the institution. Patients were included via non-probability; consecutive sampling technique and sample size was calculated using WHO sample size calculator with confidence level 95% and level of significance 5%.[6] All adult patients of perianal abscess undergoing incision and drainage were included in the study. Patients with uncontrolled Crohn's disease, Diabetes Mellitus, ulcerative colitis, previous anorectal surgery, Fournier's gangrene, allergy to ciprofloxacin and chronic renal failure were excluded.

All the patients who had incision and drainage for treating perianal abscess were divided randomly into two groups by lottery method. Postoperatively patients of group A were advised to take sitz bath alone thrice daily for two weeks. Sitz bath solution was made by using warm water by adding 20ml of pyodine to 5 liters of water. Patients were advised to sit in that water for 15-20 minutes. Patients of group B were advised to use sitz bath for two weeks along with oral antibiotics (Ciprofloxacin 500 milligram twice daily & Metronidazole 400 mg thrice daily for seven days). Weekly follow-up was done for one month. On follow-up wound was assessed for healing and pain. Subjective complaint regarding pain at the wound site was recorded on visual analogue score from 0-10 (zero = no pain and 10=maximum pain).

All data was collected on specified proformas and recorded. Data was analyzed using SPSS version 22. Frequencies were calculated for qualitative variables like gender, healing and pain. Standard deviation was calculated for quantitative variables like age and size of wound. Chi-square test was applied to compare pain and healing between two groups. P value ≤ 0.05 was taken as significant.

Results

There were total of 147 patients enrolled in the study as per inclusion criteria. There were 72 patients in group A and 75 in group B. The mean age of the patients was 40.25±15.35 and mean wound size was 6.55 ± 2.45. (Table I)

Table I: Demographics of the patients. (n=147)

	Group A (n=72)	Group B (n=75)	Mean
Age, years	40.9 ± 15.8	39.6 ± 14.9	40.25 ± 15.35
Gender			
Male	44 (61.11%)	41 (54.61%)	42.5
Female	28 (38.88%)	34 (45.33%)	31.0
Mean wound size, cm	6.4 ± 2.4	6.7 ± 2.5	6.55 ± 2.45

Distribution of patients by wound size is shown in Table II. Comparison of pain score measured by VAS and wound healing is shown in Table III. The difference in pain score by VAS is not statistically significant (p=0.329) at follow up, while wound healing at fortnightly visit in group A was more than in group B with statistically significant difference (p=0.003).

Table II: Distribution of patients by size of wound.

Wound size (cm)	Group A n(%)	Group B n (%)
More than 5 cm	27 (37.5)	33 (44)
5 - 12 cm	45 (62.5)	42 (56)

Table III: Comparison of Pain score measure by VAS and Wound healing.

	Group A (n=72)	Group B (n=75)	P value
Pain Score	N (%)	N (%)	
Yes	52 (72.22)	51 (68)	0.329
No	22 (27.88)	24 (32)	
Wound healing			
Healed	56 (77.77)	47 (62.66)	0.003
Not healed	16 (22.23)	28 (37.34)	

Discussion

Perianal abscess is a common condition that frequently presents to emergency general surgeons.[14] Surgical drainage is still the major method of treating perianal abscess. The secondary goal of the treatment is to allow the cavity to recover after incision and drainage. By systematically comparing the two treatment modalities of sitz baths alone vs sitz baths with antibiotics after drainage of perianal abscess, this study addressed the existing controversies, and offered a clearer understanding of their respective merits and limitations.

Literature showed that men are more frequently affected than women, and the most common age for presentation is 20 to 60 years, with a mean of 40 years.[15] Similarly, this study found a mean age of 40.25 years, more frequently in males. Clinically, this disease is manifested by a constant and progressive acute pain and swelling that may worsen with defecation.[16,17] The common presentations of this study patients were perianal pain and swelling that is in consistent with other studies.[18,19]

Surgical drainage is the main treatment of perianal abscess in a typical emergency setting and is usually performed by general surgeons. However, these patients are mostly operated upon by registrars and sometimes by junior trainees under supervision.[20] Czeiger et al also shared this view and recommended that the fistulotomy should be performed during drainage only when the surgery is being performed by an experienced proctologist.[21] In present study, all patients underwent incision & drainage under spinal or general anaesthesia. The focus of our study was not on the surgeon's expertise but primarily on the effectiveness of sitz baths in perianal abscess.

A Sitz bath, which is a simple treatment, may be used to reduce postoperative pain associated with anorectal diseases. Pain is relieved by sitz baths, although the mechanism is unknown. However, clinicians recommend sitz baths as a generally safe technique for pain management. The Sitz bath and non-Sitz bath treatment did not differ statistically significant from one another, according to the literature.[22] This study supported the same conclusion that there is no significant difference in comparison of pain by VAS between two groups (p=0.329).

Our study revealed a statistically significant difference between two groups regarding wound status. (p=0.003) These findings are comparable with the study carried out by Sözener et al,[10] they also demonstrated that the sitz bath alone group significantly better in terms of wound healing (p=0.037). Ghahramani et al also showed same comparable results.[6]

The small sample size employed as the study population was one of this study's limitations. It is challenging to validate these results because of the small sample size. The short postoperative follow up was another drawback of this research, which suggests that long-term consequences are not taken into account. The researcher suggests expanding the study population and the postoperative monitoring period as guidelines for future studies. The authors also suggest adopting these research results as a benchmark for other investigations with the aim of creating standard protocols for using this therapy.

Conclusion

'Sitz bath alone' is better and as effective as 'Sitz bath plus antibiotics' in the treatment of post-operative perianal abscess in terms of wound healing.

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