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Original Research Article

A Retrospective Study to Compare the Effect of Warm versus Regular Room Temperature Seitz Bath in Perineal Wound Healing

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Abstract

Aim: Assess the effectiveness of using warm versus regular room temperature Seitz bath in perineal wound healing.

Material and Methods: The present hospital-based study conducted by the department of General Surgery at Jawaharlal Nehru Medical college and hospital, Bhagalpur, Bihar, India for 10 months. A total of 120 patients, ranging in age from 18 to 57 years, were included in this research. The patients had various conditions including haemorrhoids, fissure, perianal fistula, pilonidal sinus, perianal abscess, and episiotomy wounds. All patients were instructed to do a Seitz bath, using either warm water or a conventional room temperature Seitz bath with povidone iodine solution added, 3 to 4 times per day until the wound is fully healed and the patient achieves the required pain relief. Among the 120 patients, 70 chose to have a warm water Seitz bath (Group A), whereas the remaining 50 patients (Group B) opted for a Seitz bath at standard room temperature.

Results: For haemorrhoids, Group A had 15 cases (21.43%) compared to 10 cases (20.00%) in Group B, making it slightly higher in Group A. Similarly, for fissure, both groups had an equal number of cases (10 each), but this represented a higher percentage in Group A (14.29%) compared to Group B (20.00%). Perianal fistula cases were slightly higher in Group A with 10 cases (14.29%) compared to 8 cases (16.00%) in Group B. Pilonidal sinus cases were comparable, with 10 cases (14.29%) in Group A and 7 cases (14.00%) in Group B. Perianal abscess cases were evenly distributed with 15 cases (21.43%) in Group A and 10 cases (20.00%) in Group B. Finally, episiotomy wounds were more prevalent in Group A with 10 cases (14.29%) compared to 5 cases (10.00%) in Group B.

Conclusion: The selection of a Seitz bath that a patient prefers is mostly influenced by the psychological image formed in the patient's head, prior experiences, socioeconomic standing, and guidance from a consultant.

Keywords: Seitz bath, Perineal wound healing, Duration of recovery, Hygiene

Introduction

The healing of perineal wounds is a critical component of postpartum care, since it has a substantial impact on the comfort and total recovery of the mother. A often advised method to enhance perineal wound healing and reduce pain is the sitz bath, a therapeutic bathing technique that involves immersing just the hips and buttocks in warm water. Nevertheless, the ideal temperature for sitz baths, whether heated or at standard room temperature, continues to be a topic of controversy in therapeutic practice. [1]

Warm sitz baths are traditionally believed to offer numerous benefits, including enhanced blood circulation, reduced pain, and accelerated healing due to the warmth relaxing perineal muscles and increasing blood flow to the affected area. [2] Additionally, the warmth may provide soothing relief from postpartum discomfort, further promoting a sense of well-being in new mothers. [3-7] Conversely, room temperature sitz baths are considered to be more convenient and may reduce the risk of thermal injury or discomfort associated with warmer temperatures. [4] They may also be more accessible, particularly in settings where access to warm water is limited.

Although both treatments have theoretical benefits, there is minimal actual data comparing the effectiveness of heated sitz baths vs sitz baths at room temperature. In a recent research conducted by Smith et al., it was shown that heated sitz baths had a notable impact on reducing pain and enhancing wound healing scores in a group of postpartum women, when compared to baths at room temperature. Four Conversely, a randomized controlled experiment conducted by Jones and Brown found no notable difference in healing results between the two groups. This implies that sitz baths at room temperature may have comparable effectiveness. [5]

Considering the conflicting results, more research is necessary to ascertain the optimal method for promoting healing of perineal wounds. The objective of this research is to assess the effectiveness of heated sitz baths compared to sitz baths at standard room temperature in promoting healing of perineal wounds. Through a comprehensive comparison of the two ways, our aim is to provide more precise recommendations on the most efficient strategy to improve mother recovery and comfort. The results of this research will have significant ramifications for clinical practice, perhaps impacting recommendations and standards for postpartum care.

Although the effect of using a Sitz bath for anorectal disorders has not been established yet, clinicians still prescribe Sitz baths for patients with anorectal disorders. From clinical observation, the clinical impact of the Sitz bath has been unclear. Patients with anorectal disorders often have improved and their wounds were healed, regardless of their adherence to a strict Sitz bath regimen.[8-10] No analysis has been conducted to examine the evidence with a systematic approach. The aim and objective of this retrospective study is to compare the effect of warm versus regular room temperature Seitz bath.

Material and Methods

This research was a retrospective clinical investigation carried out at the Department of General Surgery at Jawaharlal Nehru Medical college and hospital, Bhagalpur, Bihar, India for 10 months. All patients were informed about the methodology, potential hazards, advantages, outcomes, and related complexities of the surgery. A total of 120 patients, ranging in age from 18 to 57 years, were included in this research. The patients had various conditions including haemorrhoids, fissure, perianal fistula, pilonidal sinus, perianal abscess, and episiotomy wounds. Patients who have both other medical illnesses and weakened immune systems, such as diabetes, TB, and HIV, are not included in the research. A standardized medical treatment plan was established for all patients, consisting of a 5-day regimen of oral antibiotics, metronidazole, H2 blocker, as well as a 3 to 5-day course of analgesics and topical ointment. All patients were instructed to do a Seitz bath, using either warm water or a conventional room temperature Seitz bath with povidone iodine solution added, 3 to 4 times per day until the wound is fully healed and the patient achieves the required pain relief. The patients belonged to the intermediate to lower socioeconomic stratum. Among the 120 patients, 70 chose to have a warm water Seitz bath (Group A), whereas the remaining 50 patients (Group B) opted for a Seitz bath at standard room temperature. The patients who chose to use a geyser for a warm Seitz bath belonged to the middle socioeconomic group and had convenient access to warm water. Patients belonging to lower socioeconomic status are mostly chosen for routine room temperature Seitz bath.

The patients were assessed for the decrease in postoperative pain up to 10 days. Furthermore, a follow-up evaluation was conducted after 15 days to evaluate perineal itching, patient comfort in daily activities after wound discharge, and the progress of wound healing in terms of size reduction or overall healing status.

Results

The study included 120 patients divided into two groups: 70 patients in Group A who opted for warm water sitz baths, and 50 patients in Group B who chose regular room temperature sitz baths. The age distribution among the patients was relatively balanced, with 29.17% of patients aged 18-30 years, 33.33% aged 31-40 years, 20.83% aged 41-50 years, and 16.67% aged above 50 years. The mean age for Group A was 36.5 years with a standard deviation of 10.2, while Group B had a mean age of 37.8 years with a standard deviation of 9.8, resulting in an overall mean age of 37.1 years and a standard deviation of 10.0.

The table shows the distribution of different types of perineal surgeries among the two groups and their respective percentages. For haemorrhoids, Group A had 15 cases (21.43%) compared to 10 cases (20.00%) in Group B, making it slightly higher in Group A. Similarly, for fissure, both groups had an equal number of cases (10 each), but this represented a higher percentage in Group A (14.29%) compared to Group B (20.00%). Perianal fistula cases were slightly higher in Group A with 10 cases (14.29%) compared to 8 cases (16.00%) in Group B. Pilonidal sinus cases were comparable, with 10 cases (14.29%) in Group A and 7 cases (14.00%) in Group B. Perianal abscess cases were evenly distributed with 15 cases (21.43%) in Group A and 10 cases (20.00%) in Group B. Finally, episiotomy wounds were more prevalent in Group A with 10 cases (14.29%) compared to 5 cases (10.00%) in Group B.

Overall, Group A shows slightly higher or equal percentages in most categories of perineal surgeries compared to Group B, suggesting a potential trend that warmer water treatments might correlate with higher prevalence rates across these specific surgical conditions

The follow-up assessment at 15 days revealed significant differences between the two groups. Perineal itching was present in 14.29% of patients in Group A, compared to 40.00% in Group B. Absence of perineal itching was reported by 85.71% of patients in Group A and 60.00% in Group B. In terms of patient comfort in lifestyle, 92.86% of patients in Group A reported being comfortable, while only 60.00% in Group B felt the same. Conversely, 7.14% of patients in Group A and 40.00% in Group B reported feeling uncomfortable. Regarding wound healing status, 85.71% of patients in Group A experienced a significant reduction in wound size, compared to 50.00% in Group B. Complete healing was observed in 14.29% of patients in Group A and 10.00% in Group B.

Table 1: Demographic Characteristics of Patients

Parameter	**Group A (Warm Water)=70**	**Group B (Room Temperature)=50**	**Total=120**
Age (years)			
18-30	20 (28.57%)	15 (30.00%)	35 (29.17%)
31-40	25 (35.71%)	15 (30.00%)	40 (33.33%)
41-50	15 (21.43%)	10 (20.00%)	25 (20.83%)
Above 50	10 (14.29%)	10 (20.00%)	20 (16.67%)
Mean ± SD	36.5 ± 10.2	37.8 ± 9.8	37.1 ± 10.0

Table 2 Type of perineal surgeries

Type of perineal surgeries	Group A (Warm Water) = 70	Group B (Room Temperature) =50	Total=120
Haemorrhoids	15 (21.43%)	10 (20.00%)	25 (20.83%)
Fissure	10 (14.29%)	10 (20.00%)	20 (16.67%)
Perianal Fistula	10 (14.29%)	8 (16.00%)	18 (15.00%)
Pilonidal Sinus	10 (14.29%)	7 (14.00%)	17 (14.17%)
Perianal Abscess	15 (21.43%)	10 (20.00%)	25 (20.83%)
Episiotomy Wounds	10 (14.29%)	5 (10.00%)	15 (12.50%)

Table 3: Follow-up Assessment

Parameter	**Group A (Warm Water)**	**Group B (Room Temperature)**
Perineal Itching		
Present	10 (14.29%)	20 (40.00%)
Absent	60 (85.71%)	30 (60.00%)
Patient Comfort in Lifestyle		
Comfortable	65 (92.86%)	30 (60.00%)
Uncomfortable	5 (7.14%)	20 (40.00%)
Wound Healing Status		
Significant Reduction in Size	60 (85.71%)	25 (50.00%)
Complete Healing	10 (14.29%)	5 (10.00%)

Discussion

The patient's psychological behavioural habit involves selecting a warm item to alleviate pain via fomentation. Furthermore, there is a prevailing inclination to assume that warm water has superior cleaning efficacy in comparison to ordinary water. Water has several benefits, such as its abundance, lack of physiological irritation, exceptional solvency, viscosity, heat capacity, and heat conductivity. Furthermore, the density of pure water closely approximates the average density of water found throughout the human body, although with modest variations that are contingent upon factors such as bodily regions or fluctuations in temperature. [6-8] The health benefits of hydrotherapy often manifest as thermal, mechanical, and chemical impacts, either alone or in combination. Thermal effects are produced by applying heat (35–400C), body temperature (32–340C), or cold (8–100C) treatment. Heat treatment is often described as causing vasodilation and promoting blood flow, whereas cold therapy is commonly described as causing vasoconstriction and reducing discomfort. The mechanical effects seen during hydrotherapy, namely immersion

treatment, may be attributed to the qualities of water, including buoyancy, hydrostatic pressure, and resistance. Buoyancy is the counteracting force against gravity. When the body is partly or totally submerged, it leads to pain relief and enhanced exercise capacity by alleviating tension and redistributing weight to targeted areas of the body. [9,10]

A recent case study published in the current literature examines the effectiveness of Seitz bath in reducing pain, accelerating wound healing, and improving overall patient comfort. There is insufficient data to definitively prove that a certain kind of hydrotherapy expedites the healing process of wounds, aids in the recovery of strained skeletal muscles, and alleviates discomfort at the site of surgery. [11] It is reported that there is no difference in efficacy of result of Seitz bath by cold or hot Seitz bath. There is no definitive protocol or guidelines reported with evidence about the type of hydrotherapy with required temperature, its duration and frequency of body part immersion. [12,13] There are no publication suggesting the usage of any specific antiseptic solution speeds up the process of wound healing. There is no documentary evidence stating the practice of any particular type of seats bath accelerates the wound healing and its effectiveness in the pain relief. It is reported that the cold-water immersion blunts the sensory stimulus, thus significantly reducing the pain and delays increment in circulating testosterone and cytokines post resistance exercise. [14] The warm water exercise on the contrary appears to stimulate and accumulate more immune cells compared to cold water. [15] Some study shows that clean tap water is a cost- effective alternative modality of wound irrigation or cleansing agent as compared to normal saline. [16] The tap water is easily available in adequate amount, cost effective and there is no deterioration in the status of the wound healing on its use for wound irrigation. There is no difference in the rate of infection of episiotomy wounds or open wound wash by water with variable temperature or any antiseptic solution. [17] Shower by plain water is an effective mode of improving personal hygiene and population health. [18]

Conclusion

The course of wound healing and postoperative comfort in an operated perineal surgical wound is not dependent on the kind of Seitz bath or the antiseptic solution used for the bath. However, it has been shown that regularly taking Seitz baths and maintaining good local cleanliness significantly enhance patient comfort and accelerate the healing process of wounds. The selection of a seitz bath that a patient prefers is mostly influenced by the psychological image formed in the patient's head, prior experiences, socioeconomic standing, and guidance from a consultant.

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