

Clinical Retrospectively Evaluation of the Concept of the Warm versus Regular Room Temperature Sitz Bath in Perineal Wound Healing: A Comparative Study

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Abstract

Aim: The aim of the present study was to compare the effect of warm versus regular room temperature seitz bath.

Methods: This was a clinical retrospectively study conducted in the Department of General Surgery for 24 months. Out of 100 patients 55 patients (55%) opted for warm water seitz bath (Group A) and others 45 (45%) (Group B) opted for regular room temperature seitz bath.

Results: 55 patients (55%) in the study group opted for warm water seitz bath as compared to 45 patients (45%) of regular water seitz bath from the second day of surgery onwards. The cases who opted for regular water seitz, were in poor socioeconomic background, due to easy and frequent availability of regular water as compared to warm water. All the 16 cases of episiotomy (29.09%) wounds repaired by gynaecologist opted warm water seitz only. The choice of selection of sitz bath basically depends upon patient's discussion with past treated cases of similar disease, educational background, socioeconomic status in the society and treating surgeon's advice.

Conclusion: The progress of wound healing and postoperative comfort in operated perineal surgical wound does not based on type of seitz bath and the antiseptic solution used for sitz bath. But it is found that the frequency of sitz bath and subsequent improvement in the local hygiene definitely give comfort to the patient and speeds up wound healing.

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

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Introduction

Anorectal disorders include a diverse group of pathological disorders that generate significant patient discomfort and disability. [1] Despite the fact that the exact nature and cause of the conditions is known, the standard conservative treatment options are still a matter of debate. Anal Fissure is a linear ulcer in the squamous epithelium of the anal canal located just distal to the dentate line occurring usually in the posterior midline. It causes severe pain with spasm of the anal canal due to hypertonia of the internal anal sphincter. [2] Pain that is related to anorectal disorders could be relieved with the use of a Sitz bath, a relatively easy procedure that involves filling a bath tub with warm water. [3] An additive, such as salt, may be used occasionally. [4]

The clinician usually orders a Sitz bath to be carried out one-to-four times per day, plus after defecation. Generally, the patients are instructed to immerse their perineum and lower pelvis in a tub of warm water with or without additives for 20–30 min. Although the preparation of a Sitz bath is easy, some patients might feel that Sitz baths are troublesome,

rather than a necessity, to their treatment. This might be due to the underlying medical condition that is aggravated by pain and exhaustion. The Sitz bath is a relatively safe procedure. However, potential complications have been reported, such as infection and perineal burn. [5,6] Besides anorectal disorders, the Sitz bath is used widely to relieve perineal pain for post-partum women. Studies have reported that a cold Sitz bath was more effective in reducing post episiotomy edema and perineal pain, in comparison with a warm Sitz bath. [7,8]

Mechanical effects can be explained by the properties of water, such as buoyancy, hydrostatic pressure, and resistance, where the effect primarily appears when hydrotherapy is provided via immersion therapy. Buoyancy represents the force that opposes gravity, and when the body is partially or fully immersed, pain reduction and improvement in exercise ability occur due to the reduction of stress or application of weight to specific body parts. Hydrostatic pressure promotes blood flow by varying the pressure exerted on the body according

to the immersion depth, which results in increased blood flow to major organs (the heart, brain, and lungs) or the promotion of diuretic action. [9] Resistance is the force that opposes bodily movement and is associated with the viscosity of the water and results in muscle strengthening. Chemical effects result from minerals, drugs, ions, oxygen, mud, and herbs added to pure water, which triggers chemical reactions on the skin to improve skin integrity and immunity. [10] Moreover, when hydrotherapy is conducted in ocean or mountain areas, the environmental effects can further enhance the psychological effects. Combining complimentary alternative therapies, such as massage, relaxation, music, or aromatherapies, can also induce health effects by increasing the body's natural healing ability. [11]

The aim of the present study was to compare the effect of warm versus regular room temperature seitz bath.

Materials and Methods

This was a clinical retrospectively study conducted in the Department of General Surgery, Netaji Subhas Medical College and Hospital, Bihta, Patna, India for 24 months. Out of 100 patients 55 patients (55%) opted for warm water seitz bath (Group A) and others 45 (45%) (Group B) opted for regular room temperature seitz bath.

Total 100 patients comprising cases of haemorrhoids, fissure, perianal fistula, pilonidal

sinus, perianal abscess and episiotomy wounds in the age group of 18 years to 55 years were include in this study. Patients with comorbid conditions and immunocompromised medical disorders like diabetes, tuberculosis, HIV are excluded for study. A set protocol of medical line of management was made for all the patients in the form of 5 days course oral antibiotics, metronidazole, H2 blocker along with 3 to 5 days course of analgesic and ointment for local application. All the patients were asked to practice seitz bath of their choice by warm water or regular room temperature seitz bath with added povidone iodine solution 3 to 4 times in a day till the wound heals completely and the patient gets the desired pain relief. The patients were from middle to lower socioeconomic class. Out of 100 patients 55 patients (55%) opted for warm water seitz bath (Group A) and others 45 (45%) (Group B) opted for regular room temperature seitz bath. The patients who opts geyser for warm seitz bath were from middle socioeconomic group who had easy accessibility to warm water. The patients from poor socioeconomic class mainly selected for regular room temperature seitz bath.

The patients were evaluated in view of reduction in postoperative pain till 10 days. In addition, 15days follow up assessment about perineal itching, patient comfort in lifestyle in view of discharge from wound and significant reduction in size of the wound or healing status of wound was done.

Results

Table 1: Distribution of cases (Group A)

Type of perineal surgeries	Number of cases=55	%
Hemorrhoids	9	16.36
Fissures in ano	8	14.54
Fistula in ano	8	14.54
Perineal abscess	7	12.72
Pilonidal sinus	7	12.72
Episiotomy	16	29.09

55 patients (55%) in the study group opted for warm water seitz bath as compared to 45 patients (45%) of regular water seitz bath from the second day of surgery onwards. The cases who opted for regular water seitz, were in poor socioeconomic

background, due to easy and frequent availability of regular water as compared to warm water. All the 16 cases of episiotomy (29.09%) wounds repaired by gynaecologist opted warm water seitz only.

Table 2: Distribution of cases (Group B)

Type of perineal surgeries	Number of cases=45	%
Hemorrhoids	10	18.18
Fissure in ano	9	16.36
Fistula in ano	9	16.36
Perineal abscess	8	14.54
Pilonidal sinus	7	12.32

The choice of selection of sitz bath basically depends upon patient's discussion with past treated cases of similar disease, educational background, socioeconomic status in the society and treating surgeon's advice.

Discussion

It is patient's psychological behavioral pattern to opt or choose for fomentation by warm object to reduce pain. Moreover, there is a general tendency to believe that warm water has better cleansing property as compared to regular water. Water offers various advantages, including being abundant; not physiologically irritating; and having an excellent solvency, excellent viscosity, high heat capacity, and high heat conductivity. In addition, the density of pure water is similar to the average density of the water present in the human body, although it varies slightly, depending on body parts or temperature changes. The health effects of hydrotherapy generally appear as thermal, mechanical, and chemical effects, either alone or as mixed effects. Thermal effects are elicited via heat (35–400C), body temperature (32–340C), or cold (8–100C) therapy. Heat therapy is typically explained by vasodilation and blood flow facilitation effects, while cold therapy is typically explained by vasoconstriction and pain reduction effects. Mechanical effects can be explained by the properties of water, such as buoyancy, hydrostatic pressure, and resistance, where the effect primarily appears when hydrotherapy is provided via immersion therapy. Buoyancy represents the force that opposes gravity, and when the body is partially or fully immersed, pain reduction and improvement in exercise ability occur due to the reduction of stress or application of weight to specific body parts.

55 patients (55%) in the study group opted for warm water seitz bath as compared to 45 patients (45%) of regular water seitz bath from the second day of surgery onwards. The cases who opted for regular water seitz, were in poor socioeconomic background, due to easy and frequent availability of regular water as compared to warm water. All the 16 cases of episiotomy (29.09%) wounds repaired by gynaecologist opted warm water seitz only. The choice of selection of sitz bath basically depends upon patient's discussion with past treated cases of similar disease, educational background, socioeconomic status in the society and treating surgeon's advice. There is no conclusive evidence to support that a particular type of hydrotherapy accelerates wound healing, healing of stretched skeletal muscle and reduces pain at operative site. [12] It is reported that there is no difference in efficacy of result of seitz bath by cold or hot seitz bath. Despite the fact that the exact nature and cause of the conditions is known, the standard conservative treatment options are still a matter of debate. Anal Fissure is a linear ulcer in the squamous

epithelium of the anal canal located just distal to the dentate line occurring usually in the posterior midline. It causes severe pain with spasm of the anal canal due to hypertonia of the internal anal sphincter. [13] Pain that is related to anorectal disorders could be relieved with the use of a Sitz bath, a relatively easy procedure that involves filling a bath tub with warm water. [14] An additive, such as salt, may be used occasionally. [15]

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. [16] The warm water exercise on the contrary appears to stimulate and accumulate more immune cells compared to cold water. [17] The literature study shows that clean tap water is a cost-effective alternative modality of wound irrigation or cleansing agent as compared to normal saline. [18] 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. [19] Shower by plain water is an effective mode of improving personal hygiene and population health. [20]

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. [21,22] The study fulfills the objectives that the postoperative reduction in pain, comfort of patient and duration of perineal wound healing is not based on the duration and type of seitz bath and the antiseptic solution used, but it is based on the tissue handling skills of the surgeon and the local hygiene maintained postoperatively.

Conclusion

The progress of wound healing and postoperative comfort in operated perineal surgical wound does not based on type of seitz bath and the antiseptic solution used for sitz bath. But it is found that the frequency of sitz bath and subsequent improvement in the local hygiene definitely give comfort to the patient and speeds up wound healing. The choice of sitz bath which patient prefer is basically based on psychological impression created in the mind of patient, previous experience, socioeconomic status and consultant advice.

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