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Hemorrhoids during pregnancy: Sitz bath vs. ano-rectal cream: A comparative prospective study of two conservative treatment protocols

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ABSTRACT

Background: Hemorrhoids are a very common ano-rectal condition affecting pregnant females worldwide and representing a major medical and socioeconomic problem. In this paper, we aim to compare the effectiveness of the Sitz bath method with an ano-rectal cream as part of a conservative management protocol to treat hemorrhoids among pregnant Saudi Arabian females.
Methods: A prospective comparative study of the results of two conservative treatment protocols of 495 pregnant females diagnosed to have hemorrhoids during pregnancy between January 2010 and December 2014 was done. The first conservative protocol consisted of three times per day salty warm Sitz bath (using 20 g of commercial salt) for 284 patients. The second protocol consisted of topical cream twice daily for 211 patients. Both protocols included the supportive treatments of 2 g glycerin suppositories per rectum 20 min before defecation as lubricant and Metamucil bulk-forming fiber (a mix of one dose (sachet) within 240 ml (8 oz) of cold liquid) once daily after breakfast for constipation.
Results: Complete healing was achieved in all patients 284 (100%) in the Sitz bath group, compared to 179 (84.8%) in the cream group. Sitz bath was found to represent a statistically significant difference in achieving complete healing for hemorrhoids in pregnant Saudi Arabian females compared to an ano-rectal cream (p-value < 0.05).
Conclusion: A conservative treatment protocol for hemorrhoids during pregnancy, in which Sitz bath is an essential modality, showed very promising outcomes compared to an ano-rectal cream.

Statement of significance

Problem or issue

Hemorrhoids are a very common ano-rectal condition affecting pregnant females worldwide and representing a major medical and socioeconomic problem.

What is already known

Effective treatment of most forms of the disease can be achieved by increasing the fiber content in the diet, increasing liquid intake, administering stool softeners, using different types of anti-hemorrhoidal analgesics, and practical training in toilet habits.

What this paper adds

A conservative treatment protocol for hemorrhoids during pregnancy, in which Sitz bath is an essential modality, showed very promising outcomes compared to an ano-rectal cream.

1. Introduction

Hemorrhoids are the symptomatic enlargement and the distal displacement of the normal anal cushions that occur whenever the

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external hemorrhoidal veins become enlarged and swollen (varicose), which causes burning, itching, and painful anal swellings, associated with dyschezia (difficulty in defecating), and bleeding which are often the first signs. The risk factors for developing hemorrhoids include constipation, history of hemorrhoids or anal fissures, giving birth to a newborn with birth weight greater than 3800 g, and straining during childbirth for more than 20 min. Some females may develop the problem after labor due to the extreme pressure of pushing during delivery.[1,2]

Pregnancy and spontaneous vaginal delivery are well-established predisposing factors for the development of hemorrhoids in females due to the increased intra-abdominal pressure from the uterine growth, about 30% increase in blood volume, the hormonal changes, and constipation which occurs in as many as 38% of the pregnant females. Clinical reports demonstrated that hemorrhoids are most prevalent in the last trimester of pregnancy, and in the first month after delivery, and around 25%–35% of the pregnant females suffered from hemorrhoids.[1,2] In particular populations, around 85% of the pregnant females are subjected to having hemorrhoids in the third trimester. External hemorrhoids thrombosis affects 8% of the females during the last trimester of pregnancy and 20% of the females immediately after delivery. The prevalence of symptomatic hemorrhoids in pregnant females is higher than in non-pregnant women, and they become more common with the increase in age and parity.[3,4]

The combination of several factors makes hemorrhoids a common occurrence in pregnancy. First, the enlarging uterus increases the intraabdominal pressure on pelvic veins and the inferior vena cava. Second, there is an increase in the circulating blood volume of 25%–40% during pregnancy. Third, high circulating levels of progesterone lead to relaxation of venous walls and reduce venous tone. Pregnancy induced decrease in gut motility leads to constipation, which makes the pregnant female more prone to hemorrhoids. High doses of iron supplementation in prenatal vitamins also increase constipation.[4,5]

A few published clinical studies reported the incidence of symptomatic hemorrhoids during pregnancy, with the reported rates differing significantly from 7.9%–24% or even up to 38%.[1–7] In fact, insufficient data exist on the safety of the anti-hemorrhoidal treatment in pregnancy. While hemorrhoids often have a self-limiting course in non-pregnant adults, the course during pregnancy tends to be more prolonged, and hemorrhoids could resolve completely only in the postpartum period.[8]

Effective treatment of most forms of the disease can be achieved by increasing the fiber content in the diet, increasing liquid intake, administering stool softeners, using different types of anti-hemorrhoidal analgesics, and practical training in toilet habits. However, most evidence of the efficacy of such therapeutic alternatives for hemorrhoids is gained from studies performed in non-pregnant patients.[9]

A systematic literature review of both published and unpublished randomized controlled trials, which included the enrollment of about 350 patients, showed that laxatives in the form of fiber had a beneficial effect in the treatment of symptomatic hemorrhoids.[10] Decreased straining during bowel movements helps to shrink the internal hemorrhoidal veins which result in the reduction of symptoms. Bathing in warm water (40 °C–50 °C for 10 min) often relieves ano-rectal pain.[11] Several suppositories and ointments that contain local anesthetics, mild astringents or steroids are available.[8–11]

More aggressive modalities of therapy such as sclerotherapy, cryotherapy, and surgery are considered for patients who have persistent symptoms after one month of conservative therapy.[12] Some recent clinical studies have shown the effectiveness of botulinum toxin injections as a treatment for chronic anal fissure and hemorrhoids. Because of the mechanism of action, however, botulinum toxin is contraindicated during pregnancy and lactation.[13]

Although most pregnant females experience improvement or complete resolution of their symptoms with the conservative measures reported, some females will need certain medications. Oral treatment with rutosides, Centella asiatica, hidrosmine, disodium flavodate, pine bark extract, French maritime, or grape seed extract could decrease the capillary fragility and reduce the symptoms improving the microcirculation in venous insufficiency. However, the evidence of their safety in pregnancy is not yet conclusive.[14]

The treatment of hemorrhoids ranges from the conservative dietary and lifestyle modification to the radical option of surgery, depending on the degree and severity of the symptoms. Although surgery is an effective treatment modality of hemorrhoids, it is almost always reserved for the advanced stage of the disease, and it could be associated with some complications. Meanwhile, the non-operative treatment options are not quite sufficient, particularly the topical or the pharmacological approach. Therefore, the improvements in the understanding of the pathophysiology of hemorrhoids are necessary to prompt the development of novel and innovative modalities for the treatment of hemorrhoids.[15,16]

Hemorrhoids are very common entity encountered in our local practice, with an average presentation of about 300 patients per year in the outpatient clinic, in addition to about 200 patients attending the emergency department annually. Therefore, any conservative method to treat hemorrhoids and provides clean and dry anus with preservation of complete anal control all the time means a lot to our conservative community patients. As a consequence, we experienced refusal of surgical treatment of many patients and increased use of traditional herbal methods familiar to our local community, which necessitated the need for an effective conservative protocol for those group of patients. In this paper, we aim to compare the effectiveness of the Sitz bath method with an ano-rectal cream as part of a conservative management protocol to treat hemorrhoids among Saudi Arabians pregnant females.

2. Methods

A prospective comparative study of the results of two conservative treatment protocols of 495 Saudi Arabian pregnant females diagnosed and treated for hemorrhoids between January 2010 and December 2014 was done to evaluate the conservative protocol treatment outcome. The treatment protocol was designed on a digital database file in the outpatient department of Al Ansar public health general hospital in Medina, Saudi Arabia. Ethical approval was granted from Al Ansar hospital ethical committee and the management guidelines and clinical pathway subcommittee of the quality care program at the same hospital.

Patients were referred from local hospitals and primary care centers. They were all seen and managed in the outpatient clinic by the same surgeon. All patients who refused the surgical treatment option were included in the conservative protocol. Exclusion criteria included heavily bleeding hemorrhoids affecting the hemoglobin level (needed emergency surgical intervention to stop the bleeding), large hemorrhoids causing obstruction (needed emergency surgical intervention to relieve the obstruction), and large thrombosed piles (needed emergency surgical intervention to excise and evacuate the thrombi). A total of 136 patients were excluded.

According to the presentation of hemorrhoids patient, they were classified to four groups: Group1: bleeding internal hemorrhoids without prolapse (painful and non-painful), Group 2: bleeding internal hemorrhoids with prolapse that spontaneously reduce, Group 3: bleeding internal hemorrhoids with

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