

Limberg Flap Method for Pilonidal Sinus Disease

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Received: 21.12.2019

Accepted: 07.01.2020

Published: 23.01.2020

Abstract: Sacrococcygeal pilonidal sinus disease is a common chronic inflammation of the natal cleft and is mainly seen in young adults. Authors of some earlier works regarded the condition as congenital. Recently, it has become widely accepted that the condition is acquired, and thought to originate from hair follicles. Many treatment options has described in literature, thus in this study we present our results with Limberg flap reconstruction on pilonidal sinus disease. 38 patients underwent limberg flap reconstruction for pilonidal sinus disease enrolled in this study. No bleeding has occur intra and postoperatively, 2 patients developed urinary retention (%5.2), on 1 patient with diabetes mellitus wound dehiscence has developed which has treated with 3 week long simple debridement method (%2.6). 1 patient developed superficial infection treated with basic antibiotics (%2.6). No other complications has developed. No recurrence has seen in -mean -11.2 month period. We think limberg flap closure on pilonidal sinus disease is an effective and safe option.

Keywords: pilonidal sinus disease, management, limberg flap.

INTRODUCTION

Sacrocoxygeal pilonidal sinus disease (PSD) is a common chronic inflammation of the natal cleft and is mainly seen in young adults[1,2]. Authors of some earlier works regarded the condition as congenital[1,3]. Recently, it has become widely accepted that the condition is acquired and thought to originate from hair follicles[1,4]. Many treatment options has described in literature, thus in this study we present our results with Limberg flap reconstruction on PSD.

PATIENTS AND METHODS

38 patients underwent limberg flap reconstruction for pilonidal sinus disease enrolled in this study. Patients with purulent discharge and with acute pilonidal abscess, bleeding disorders and patients with unregulated systemic diseases excluded. All procedures performed by the same surgeon. The patients were operated on under spinal anesthesia, and placed in the prone jackknife position. The buttocks were laterally retracted with adhesive tapes. The sacrococcygeal area was washed with 10% povidone-

iodine solution. The extension of the sinus was determined by methylene-blue injection into the sinus tract. Excision of all sinus tracts, fistula borders, and scar tissues was carried out deep to the postsacral fascia and surrounding undamaged fibrolipomatous tissues. After removing the specimen, the Limberg fasciocutaneous flap was prepared by extending the incision down to and through the right or left gluteus maximus fascia. Bleeding control managed with monopolar electrocautery (Valleylab Force FX) on defect side and with oxidized regenerated cellulose (Oxigel ®, Betatech Medical, Istanbul/Turkey) sponge on flap side. After closing the defect with flap tissue, skin closure performed with 3.0 prolene sutures. Suction drains were placed and not removed until the drainage volume slums 30 ml. The perioperative complications has evaluated from patient records.

RESULTS

The mean age of the Patients was 31.6(+/-1.1) with 14 female, 24 male. Mean drainage time was 2.4 days (+/-1.1). No bleeding has occur intra and postoperatively, 2 patients developed urinary retention

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DOI : 10.36344/ccijmb.2020.v02i01.002

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DISCUSSION

Pilonidal cyst is a troublesome and embarrassing condition, significantly detrimental to quality of life of patients. Despite advances in surgery and many studies on various surgical and conservative treatment strategies, there is no clearly defined standard management scheme. Common presenting complaints include pain, swelling and discharge when these sinuses become infected[5,6]. Despite surgical therapy, dating back more than a century, management remains controversial[5]. No single method has been appointed that would allow for radical and certain cure while causing least discomfort to the patient at the same time[6]. As being not certain today, however, the theory that it is acquired is more widely accepted. Work by Georgios Karydakias[7-9] who highlighted 3 main factors contributing to pilonidal disease (loose hair, an external force that facilitates insertion of hair into the skin and an underlying vulnerability of natal cleft skin), had a pivotal role in this paradigm shift. The first 2 factors are related to personal hygiene and lifestyle, and their modulation can influence the initiation, development and recurrence of pilonidal disease. Armstrong and Barcia [10] reported that improved hygiene, an active lifestyle and hair control in the natal cleft area decreased the need for surgical procedures and resulted in faster return to work. However, the third factor can be modified only surgically. The rhomboid, well-vascularized transposition Limberg flap was first proposed by the Russian maxillofacial surgeon Alexander Limberg (1894–1974), author of the fundamental work in plastic surgery “Mathematical principles of local plastic procedures on the surface of the human body.”[11,12]. However many flap techniques has been used widely; In 6 studies, Karydakias/Bascom and Limberg methods were compared, no differences were noted as for postoperative complications and long-term results. In one analyzed study, it has been shown that postoperative wound drainage leads to reduction of infectious complications, however, it does not influence long-term results. Despite the limited number of Patients, our study shows parallelism with literature. We think limberg flap closure on pilonidal sinus disease is an effective and safe option.

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