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Minimal Sphincter Sacrificing Procedures in the Management of horseshoe Perianal Fistula

Thesis

Submitted for partial fulfilment of MD degree in General Surgery

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List of Abbreviations

Abb.	Full term
ACAF	Anocutaneous advancement flap
ATZ	Anal transition zone
CT	Computed tomography
DPAS	Deep postanal space
EAS	External anal sphincter
EMT	Epithelial to mesenchymal transition
EUA	Examination under anesthesia
IAS	Internal anal sphincter
IBD	Inflammatory bowel disease
IRA	Inferior rectal arteries
LIFT	Ligation of Intersphincteric Fistula Tract
MRA	Middle rectal artery
MRI	Magnetic Resonance Imaging
MSAF	Mucosa-submucosa flap
RWAF	Rectal wall advancement flap
SJUH	St James University hospital
SPTF	Standard Practice Task Force
SRA	Superior rectal artery
STIR	Short T1 inversion-recovery

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INTRODUCTION

Fistula-in-ano is one of the most frequent anorectal pathologies with a wide spectrum of clinical presentations ***(Kaiser, 2008).***

It is an abnormal hollow tract, which is lined with granulation tissue that has a primary opening inside the anal canal and communicates with a secondary opening in the perianal skin. Secondary tracts that extend from the primary opening may be present and could be multiple in number ***(Kumar et al., 2016).***

A perianal fistula represents a chronic process whereas an abscess is representative of an acute inflammatory process of the same pathology ***(Kumar et al., 2016).***

The incidence of developing a new cryptoglandular perianal fistula is approximately 2 per 10,000 people per year ***(Ommer et al., 2011).***

The most widely accepted theory for the pathogenesis of perianal fistula is that of the cryptoglandular theory of Eisenhammer and Parks. The theory states that perianal abscesses are a result of the blockage of one of the perianal glands which subsequently cannot spontaneously drain into the anal canal ***(Eisenhammer, 1966, Sugrue et al., 2017).***

Subsequently, even if there is spontaneous or iatrogenic drainage, it is hypothesized that the area of the abscess is a nidus for chronic infection that eventually leads to fistula formation ***(Parks, 1961).***

Parks Classification is the most common classification used for fistulas-in-ano. It defines four types: intersphincteric, transsphincteric, suprasphincteric, and extrasphincteric ***(Parks et al., 1976).***

When the incriminating anal gland originates from the posterior midline and traverses the conjoint longitudinal muscle into the deep postanal space, a deep postanal abscess/ fistula results. Further extension of this infective process into the unilateral or bilateral ischiorectal fossa leads to a horseshoe abscess/ fistula ***(Hanley, 1965).*** This type of fistula accounts for about 15% – 20% of anorectal fistula and its management remains challenging to surgeons to this very day ***(Hamilton, 1975).***

Successful management of horseshoe perianal fistula requires thorough understanding of anorectal anatomy and better understanding of pathogenesis of the disease ***(Shin and Hall, 2014).***

Horseshoe abscess/fistula with a primary opening in the posterior midline, a trans-sphincteric extension to the deep postanal space, and bilateral involvement of the ischioanal fossae represent the most severe manifestation. It remains a