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LETTER TO THE EDITOR

A Letter to the Editor on "Anatomical Planes in Rectal Cancer Surgery". The Surgical Plans Provided with a Perineal Ischioanal Fossa Access, Used for Transsphincteric Rectal Resection Techniques, Should be Considered Especially in Lower Rectal Cancer Surgery

Transsfinkterik Rektal Rezeksiyon Teknikleri için Kullanılan, Perineal Iskioanal Fossa Erişimi ile Sağlanan Cerrahi Planlar, Özellikle Alt Rektal Kanser Cerrahisinde Göz Önünde Bulundurulmalıdır

Ali Naki Yücesoy

Yeni Yüzyıl University Faculty of Medicine, Department of General Surgery, İstanbul, Turkey

Keywords: External anal sphincteric musculature, ischioanal fossa, pudendal nerve, transsphincteric rectal resection

Anahtar Kelimeler: Dış anal sfinkter kası, iskioanal fossa, pudendal sinir, transsfinkterik rektum rezeksiyonu

Dear Editor,

I read the article entitled "Anatomical Planes in Rectal Cancer Surgery", which has spectacular and educational values related to the anatomical features of the abdominopelvic cavity in rectal cancer surgery written by Açar H.A. and Kuzu M.A. in your journal.[1] I would like to make some additions related to the anatomical features and anatomical planes of the rectum provided with perineal ischioanal fossa access. The rectum passes through three main anatomical cavities throughout its journey through the body: the abdominal, pelvic, and ischioanal cavities, respectively. A significant portion of the lower rectum passes through the ischioanal fossa as a part of the surgical anal canal, and fuses with the anatomical anal canal. Although abdomipelvic rectal anatomy and surgical plans are always considered in rectal cancer surgery, it is noteworthy that ischioanal surgical plans, which should be considered especially in transsphincteric rectal resection techniques for lower rectal cancer surgery, are ignored. One of the most important reasons for this condition is that the intersphincteric resection technique is the most commonly used surgical technique in lower rectal cancer surgery and the ishcioanal fossa access cannot be achieved with the intersphincteric technique (ISR). IRS techniques are performed by using perabdominal and peranal approaches.[1,2] Transanal total mesorectal excision is also performed in the intersphincteric dissection plane.[3] There is no doubt that the transsphincteric rectal resection techniques (TSR) could not get their deserved place in rectal cancer surgery, and should be taken into account as alternative surgical methods for lower rectal cancer.[4,5,6,7] Extrasphincteric rectal dissection, transsphincteric rectal resection and proximal segmental external sphincteric excision are surgical procedures

Address for Correspondence/Yazışma Adresi: Ali Naki Yücesoy MD,
Yeni Yüzyıl University Faculty of Medicine, Department of General Surgery, İstanbul, Turkey
E-mail: alinakiyucesoy@gmail.com **ORCID ID:** orcid.org/0000-0003-4282-5660
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performed in TSR. Unlike ISR, the main reason for the anatomical and surgical differences in TSR is the use of ischioanal approaches in addition to abdominal access.

The ischioanal fossa has a inverted manner truncated prism shape between the levator ani muscle and perineum, filled with lipmatous tissue. It is covered with the obtrator fascia, and does not contain mesorectal tissue. Ischianal fossa hosts to the external anal sphincteric musculature, including the distal two-third part of the lower rectum, and this structure is named as the surgical anal canal. In this manner, the surgical anal canal is formed by two intertwined cylindrical muscular tubes, and the intersphincteric dissection plan is a potential space between both muscular tubes.[8]

Another important anatomical structure in the ischioanal fossa is the pudendal nerve. The pudendal nerves originate from the sacral 2,3, and 4 roots, advance through the posterior wall of the ischianal fossa as pudendal neurovascular bundles after exiting from the Alcock's canal, and give their branches to the external anal sphincteric musculature following a hook formation at its base (Figure 1). Besides the abdominopelvic anatomical features and surgical plans, the ischioanal fossa should be taken into consideration, especially in lower rectal cancer, due to the elements it contains.



Figure 1. Posterior ischioanal cadaveric view showing the pudendal neurovascular branches of the external anal sphincteric musculature

Informed Consent: Since the photograph used in the article belongs to the cadaver, patient approval information was not required.

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