OPEN ACCESS Freely available online

Medical & Surgical Urology

Mini Review

Voiding Troubles, Fecal Incontinence and Anal Intercourse

Abdel Karim M El Hemaly* **and Laila AS Mousa**

Department of Ob/Gyn and Uro-Gynecology, faculty of Medicine, Al Azhar University, Cairo, Egypt

ABSTRACT

Voiding (urine &/or feces) depends on:

Toilet training early in life switch voiding from uncontrolled CNS-pelvic parasympathetic action to voluntary CNS-thoracolumbar sympathetic act.

The IAS is a collagen-muscle tissue cylinder that surround the anal canal. The IAS consists mainly of strong collagen tissue cylinder mixed with smooth plain muscle fibers with its nerve supply from the autonomic nervous system. It is surrounded in its lower part with the voluntary striated muscle, the external anal sphincter (EAS).

The IUS is a collagen-plain muscle tissue cylinder that extends from the bladder neck to the perineal membrane in both sex. The external urethral sphincter is a striated voluntary muscle lying in the deep perineal pouch.

Voiding training induces and keeps high alpha-sympathetic tone at both the IUS & the IAS to maintain both contracted all the time, thus keeping the urethra & the anal canal empty and closed. On desire &/or need the person lowers the high alpha sympathetic tone at the IUS &/or the IAS to open the urethra &/ or the anal canal to void.

Injury of the IAS leads to fecal incontinence (FI). The injury is mostly traumatic from childbirth trauma (CBT) but it can be the result of anal intercourse. Subsequently the presence of excreta in the open anal canal will induce sense of desire to void; it may give false impression of desire to void urine (OAB).

Homosexuality &/or voiding incontinence are an important cause of psychological ailment.

Keywords: Fecal Incontinence (FI); Internal Anal Sphincter (IAS); External Anal Sphincter (EAS); Toilet training; Sympathetic nervous system

HOMOSEXUALITY AND VOIDING TROUBLES

Body excreta (urine and stools) are stored in the urinary bladder (UB) and the rectum. The channels for their expulsion are the urethra in front and the anal canal behind. Both the urethra and the anal canal have the same embryology (from the cloaca), the same vascular and nerve supply and the same function (conduit) for expulsion of body excreta. Both channels (the urethra and the anal canal after toilet training) remain empty and closed all the time until there is a need &/or a desire to void.

The anal canal is surrounded by two sphincters: an internal involuntary anal sphincter (IAS) and an external voluntary anal sphincter (EAS). The IAS consists mainly of a strong collagen sheet cylinder with smooth muscle tissue fibers lying on and intermingle with the stout collagen bundles that surrounds the entire length of the anal canal. The tough collagen of the IAS has collagen strands that extend down to the peri-anal skin wedging it to the buttock skin giving it extra support and strength. While the EAS is a voluntary striated muscle. It consists of three parts deep, superficial and the subcutaneous parts. It surrounds the lower part of the IAS and the anal canal. It has its nerve supply from the peripheral systemic voluntary nervous system though the pudendal nerve [1-4] (Figures 1& 2).

***Correspondence to:** Abdel Karim M El Hemaly, Department of Ob/Gyn and Uro-Gynecology, faculty of Medicine, Al Azhar University, Cairo, Egypt, Tel: +201001577969; E-mail: profakhemaly@hotmail.com

Received date: June 06, 2020; **Accepted date: July 20**, 2020; **Published date: June** 27, 2020

Citation: El Hemaly AKM, Mousa LAS (2020) Voiding Troubles, Fecal Incontinence and Anal Intercourse. Med Sur Urol 9:232. doi: 10.24105/2168-9857.9.232

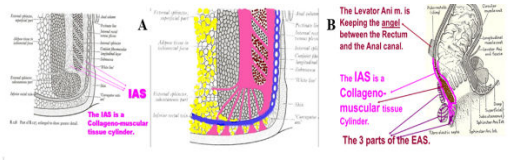

Figure 1: The anatomy of the internal anal sphincter (IAS). The IAS, according to the new description is a collagen-smooth muscle tissue cylinder that surrounds the anal canal and is surrounded in its lower part by the voluntary external anal sphincter (EAS) with its three sections.

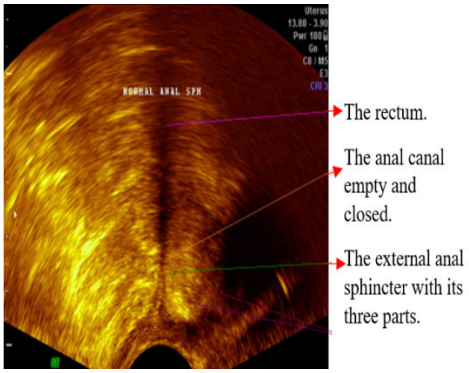

Figure 2: Coronal section of three-dimension ultrasound (3DUS) picture. It shows an intact internal anal sphincter (IAS) that surrounds the anal canal and is surrounded in its lower part with the external anal sphincter (EAS) with its three parts. The anal canal is closed and empty because of the persistent contraction of the IAS.

Defecation passes through two main sequential physiological stages. Toilet training switches defecation from the involuntary pelvic para-sympathetic act in the first stage to the second physiological step of voluntary thoraco-lumbar sympathetic second stage. This depends on a healthy intact nervous system and on an alert healthy CNS. The IAS after toilet training is always contracted keeping the anal canal empty and closed all the time until there is a desire &/ a need to void.

The presence of feces &/or flatus in the anal canal induces the sensation of voiding (feces &/or urine). Depending on the social circumstances available the person can postpone voiding by increasing the alpha sympathetic tone and inhibiting the para-sympathetic activity. The urinary bladder-the internal urethral sphincter (IUS), the rectum-the IAS get the same sensory, motor and autonomic nerve supply [1-4] (Figures 3-5).

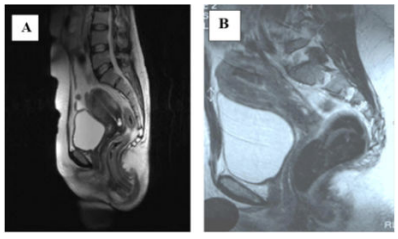

Figure 3: Sagittal sections of two MRI pictures of women, picture (A) of a patient who suffer from FI, the picture shows an open anal canal with torn IAS. Picture (B) shows healthy intact both internal urethral sphincter (IUS) with full urinary bladder and an intact IAS with full rectum and a closed and empty anal canal.

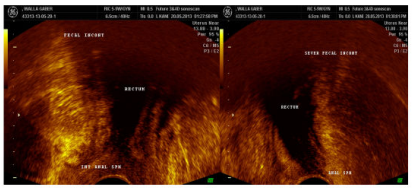

Figure 4: Coronal section by three-dimension ultrasound (3DUS) two pictures that show lacerated IAS with open anal canal in patients with FI.

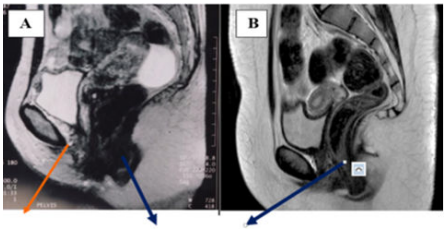

Figure 5: MRI, sagittal section of two women suffering from voiding troubles. Picture (A) suffers severe degree of voiding troubles both urinary and fecal, both the IUS, and the IAS are severely lacerated. Picture (B) show mild laceration of the IUS and marked lacerations of the IAS with passage of flatus.

The IAS in women is intimately lying on the posterior vaginal wall. Childbirth trauma (CBT), distension of the vagina causes unseen lacerations in the strong collagen chassis of the posterior vaginal wall causing its weakness, redundancy and its prolapse. It also lacerate the stout collagen chassis of the IAS leading to FI. The lacerations that affect the IAS from CBT affect its anterior segment of the entire circle leading to a horse-shoe appearance on medical imaging with MRI and 3DUS (Figures 6-8).

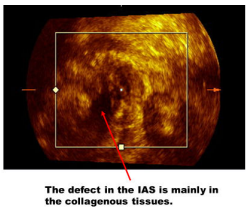

Figure 6: Cross section picture of the IAS by 3DUS, it demonstrates the defect in the collagen chassis of the IAS. Notice that there are two horse-shoe appearances one for the torn IAS and one for the torn EAS.

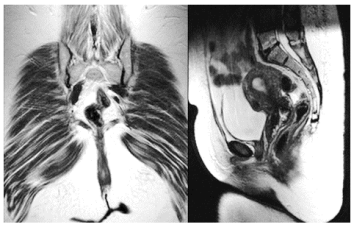

Figure 7: Two MRI images which demonstrate torn IAS with FI and passage of feces and flatus.

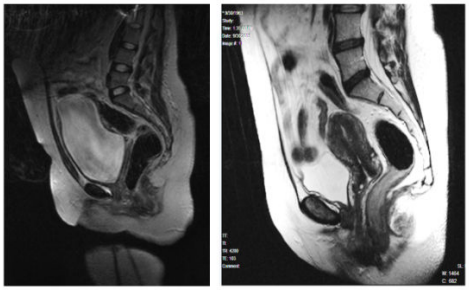

Figure 8: Two MRI pictures sagittal section in women, picture (A) is in a continent woman with intact IUS and IAS. Both the urethra and the anal canal are closed and empty. Picture (B) is in a patient with voiding incontinence with torn the collagen chassis of both the IUS and the IAS with anal canal open and passage of flatus.

Homosexuality, anal intercourse affect and lacerate the whole circumference of the IAS leaving the anal canal open for uncontrolled passage of rectal contents feces &/or flatus [1-5].

The urethra and the anal canal develop embryologic ally from the cloaca, both have the same vascular supply and the same innervation. Both have internal sphincters (collagen-muscle tissue cylinder) and striated muscle external sphincters). Thoraco-lumbar (T10-L2) sympathetic nerve supply keep both internal sphincters contracted and the urethra and the anal canal empty and closed. The IUS is a collagen-smooth muscle tissue cylinder that extends from the bladder neck down to the perineal membrane.

Torn IAS allowing passage of rectal contents (feces &/or flatus) to an open anal canal can, sometimes, can be interpreted as urine in the urethra and give sensations of urgent desire to void (OAB) [6-13].

Anal intercourse in men (homosexuals) leads to FI & OAB, and it may also cause infections: sexually transmitted diseases (STDs) and bacterial infections. It may also lead to major psychological troubles and problems. Since the vagina and the anal canal have the same embryologic origin from the cloaca and get the same nerve endings (sensors) satisfaction from anal intercourse can be similarly satisfying as vaginal intercourse, The IAS is torn, all around, from anal intercourse in women and homosexuals and lead to FI.

Homosexuality in addition to cause physical damage proved by voiding troubles, it leads to variable degree of psychiatric damage.

Fecal incontinence is the result of lacerations of the IAS and not lacerations of the external anal sphincter (EAS) only. This explains the poor results after repair of complete perineal tear, repair of the EAS whether by end-to –end or overlapping techniques [14-17].

CONFLICT OF INTEREST

We hereby confirm that no conflict of interest has been observed or shall be resulting in future.

REFERENCES

1. El Hemaly AKM, Mousa LAES, Kandil IM. Pelvic Floor Dysfunction: New Concepts on its Patho physiology and its Reconstructive Surgery. Gynecology & Obstetrics Case report 2016.
2. El Hemaly AKM, Mousa LA, Ibrahim M, Kandil IM, Morad MR, El Sokary F. Urinary and Fecal Control and Incontinence: Pathogenesis and Management. Med Sur Urol 2018; 7:10002003.
3. El Hemaly AKM, Mousa LAES, Korjak A, Kandil IM, Aldarwish AAA, Morad MR, et al. Outlet Control, Pathogenesis and Treatment: The Role of Ultrasound in its Management. Donald School Journal of Ultrasound in Obstetrics and Gynecology 2018; 12:4-12.
4. El Hemaly AKM, Mousa LA, Ibrahim M, Kandil IB, Morad MR, El Sokary F. Body Excreta Control and Incontinence. Med Sur Urol 2018; 7:100019.
5. El Hemaly AKM, Mousa LA, Kandil IM, Al Sayed MS, Zaher MA, Soliman MSA, et al. A Novel Concept on the Patho-Physiology of Defecation and Fecal Incontinence (FI) in Women-Moreover, Its Reconstructive Surgery. Intech Publication 2014; 8:47-67.
6. El Hemaly AKM, Mousa LA. Stress Urinary Incontinence, A New Concept. Eur J Obstet Gynecol Reprod Biol 1996; 68: 129-35.
7. El Hemaly AKM, Mousa LA, Kandil IM, Shehata KA. Pelvic Floor Dysfunction: New Concepts on its Pathophysiology and its Reconstructive Surgery, Gynecology & Obstetrics Case report: Imaging of the Pelvic Floor. Current Medical Imaging Reviews 2014; 3:205-214.
8. El Hemaly AKM, Mousa LA. Micturition and Urinary Continence. Int J Gynecol Obstet 1996; 42:291-292.
9. El Hemaly AKM, Mousa LA, Kandil IM. The Concept and Pathophysiology of Urinary Incontinence. In: Alhasso A and Fernando A, eds. Urinary Incontinence. Intech Publication 2012; 145-160.
10. El Hemaly AKM, Mousa LA, Kandil IM, Al-Adwani AKA. Pelvic Floor Dysfunction and its Reconstructive Surgery: Novel Concepts. Create space 2014.
11. El Hemaly AKM. Nocturnal Enuresis: Pathogenesis and Treatment. Int Urogynecol J Pelvic Floor Dysfunct 1998; 9:129-131.
12. El Hemaly AKM, Mousa LA, Kandil IM, Morad MR, Ibrhaim MM, Al Sokkary FS, et al. Overactive Bladder (OAB) New Concepts on its Patho-physiology. International Scientific Research Organization Journal (ISROJ) 2018; 3.
13. El Hemaly AKM, Mousa LA, Kurjak A, Kandil IM, Serour AG. Pelvic Floor Dysfunction, the Role of Imaging and Reconstructive Surgery. Donald School Journal of Ultrasound in Obstetrics and Gynecology 2013; 7:86-97.
14. Karen R, Wenda T. Birth, obstetrics and human evolution. BJOG: An International Journal of Obstetrics and Gynaecology 2002; 109:1199–1206.
15. Eskandar O, Shet D. Risk factors for 3rd and 4th degree perineal tear. Journal of obstetrics and gynaecology: the journal of the Institute of Obstetrics and Gynaecology 2009; 29:119-122.
16. Fernando RJ, Sultan AH, Kettle C, Radley S, Jones P, O'Brien PMS. Repair Techniques for Obstetric Anal Sphincter Injuries; Randomized Controlled Trial. Obstetrics & Gynecology 2006; 107:1261-1268.
17. Halverson AL, Hull TL. Long-term outcome of overlapping anal sphincter repair. Dis Colon Rectum 2000; 43:961-965.