

THE RELATIONSHIP BETWEEN MULTIPARITY, PELVIC STATIC DISORDER AND PHYSICAL EFFORT-RELATED URINARY INCONTINENCE

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INTRODUCTION

Multiparity predisposes many women to pelvic floor pathology, which is probably the most common disorder of adult women showing up in statistics of cardiovascular disease, depression or osteoporosis. We are in front of a growing number of ailments widely linked with symptoms, sometimes debilitating, difficult to be accepted by patients, which includes: urinary incontinence, vaginal prolapse, impaired filling and emptying of the bladder and sexual disorders.

International continence Society defines incontinence as a symptom of involuntary loss of urine (Abrams P, Cardozo). Urinary incontinence is a worldwide public health problem with major social and economic impact, having approximately 10 million patients from 10% to 35% of adults and at least 1.5 million of people institutionalized from the United States. (Fantl et al, 1996).

According to the outcome of the Norwegian study EPINCOT / HUNT, the largest European study on urinary incontinence, 20% of women reported symptoms of physical effort-related incontinence, similar values to those reported by OMNIBUS survey in Romania.

Based on these epidemiological data, knowing the impact of both giving multiple birth naturally on the pelvic floor muscles and pelvic urogenital organs, we proposed to shine some light on this by reflecting this less discussed problem in a conservative society and the society of my country, YEMEN.

OBJECTIVES

-This study aims to fill a gap in the statistics on this subject

-evaluation of the relationship between multiparity and urinary incontinence

-evaluating the health of patients and how incontinence affects quality of life and impact on socio-economic field

MATERIAL AND METHOD

We conducted this study over a period of six months: January 2012-iunie2012, which included a group of 200 patients diagnosed with physical effort-related urinary incontinence.

INCLUSION CRITERIA

- multiparity
- physical effort-related urinary incontinence
- pelvic static disorders (vaginal prolapse, urethral hypermobility)
- traumatic obstetric history or history of gynecological surgery

EXCLUSION CRITERIA

- urinary incontinence by micturition imperiosity of the overactive bladder syndrome, neurological bladder or genital prolapse presenting post-micturition residue, psychiatric disorders
- urinary infection, known that it can mimic urinary incontinence.

In the first part of the study, patients are selected based on clinical examination that included: history of neurological and urogynecology examination, pelvic and abdominal ultrasound, laboratory tests (ex. urine, urinalysis, urea, creatinine, glucose, secretion and vaginal cytology).

The second part of the questionnaire that analyzes more clinical parameters related to incontinence and frequency of incontinence episodes, and number of urination in 24 hours, the amount of urine lost during physical effort (micturition schedule). Manifestations of physical effort-related incontinence (coughing, sneezing, laughing, lifting heavy objects) and if incontinence is associated with imperiosity: UDI-6 questionnaire (urogenital

distress inventory) also often IIQ-7 questionnaires (incontinence impact quality of life) with questions related to impact on quality of life. The group was made up of people who answered "yes" to question (losing urine?) and those who at the clinical urogynecology examination showed pelvic static disorders or urethral hypermobility

RESULTS

The number of patients enrolled in this study could be much higher, but for social, cultural and religious reasons many people refuse to sign the informed consent.

Distribution on age groups

- 20 years-----40 years 36 (18%)
- 41 years -----50 years 61 (30,5%)
- 51 years -----70 years 85 (42,5%)
- 71 years -----77 years 18 (9%)

High incidence was found at age groups 61----70 years (85 persons 42,5% form the lot).

The medium age of the enrolled patients is 48,5, age extremes were 20 years, respectively 77 years.

Distribution according to the level of parity:

- 7 patients nullparious 3,7%
- 16 primiparious 8%
- 177 multiparious 88,5

It is observed that multiparious patients are predominant, the extreme case was with 10 births.

Distribution according to obstetric history of the patients:

- 18 patients gave birth with Caesarean section 9%
- 182 patients gave birth naturally 91%

Distribution by gynecological surgical history:

- 6 patients had a history of hysterectomy 3%
- 37 patients with old obstetric perineal tears healed viciously 18,5%
- 41 traumatic applications of forceps, episiotomy or perineotomy 20,5%
- 54 partum patients with inflammatory phenomena and sub-uterine involution 27%

Distribution according to hormonal status:

- 108 patients had natural menopause or surgically induced.

Distribution depending on the presence of pelvic static disorders:

- 136 patients with urethral hypermobility 68%
- 54 patients with varying degrees of urogenital prolapse 27%
- 10 patients with latent or occult physical effort-related incontinence, advanced urogenital prolapse that compresses the urethra when abdominal pressure increases masking urethral hypermobility 5%

Distribution by time of onset of urinary incontinence:

- 65 patients when coughing or sneezing 32,5%
- 57 patients to physical activity 28,5%
- 53 without any obvious reasons 26,55
- 13 when sleeping 6,5%
- 12 all the time 6%

Distribution according to the severity of physical effort-related urinary incontinence:

- 98 patients gr I 49%
- 86 patients gr II 43%
- 16 patients gr III 8%

DISCUSSIONS

Normal situation of the genital apparatus is ensured by the balance between intra-abdominal pressure leading to propulsive forces on the one hand and suspension unit integrity and support on the other. Abdominal pressure is acting on genital organs in relation to musculo-aponeurotic tonicity of abdominal organ wall and content that works by gravity and hydrostatic laws. Abdominal organs are formed in cavities having contractile character, which contain various amounts of liquid and gas, so that the pressure in the pelvis is increased compared to the diaphragm, which has negative values. The positive abdominal pressure is achieved by means resisting suspension and sustained by elasticity, tonicity and their mobility, allowing within the physiological limits the travel of the genitals. Normally, the uterus is located in the middle sagittal plane of the pelvis, between the anterior bladder and posterior rectum.

Physiological position of anteversion-uterine flexion causes abdominal pressure to be exerted on the back of the uterus, which is pushed down and forward, and the cervix headed back putting tension on the vaginal walls, where the pressure the intra-abdominal closes.

Perineum which is the most important and valuable means of maintaining the uterus having component a profound plan formed of lifting muscles that provide support and closure of the vagina and a superficial plan formed of the urogenital diaphragm, deep transverse muscle, superficial transverse muscle and tendon center with an important role in static genitals.

Genital prolapse is defined as descent of the uterus into the vagina and possible shaft protrusion, while slipping in the same direction of the walls of the vagina and bladder or rectum parts. Of the three holes that pierce the pelvic floor, vaginal orifice is the most poorly protected (the rectal abdominal pressure being protected by the sharp angle between rectal canal and anal sphincter and urethral orifice by its size and location in the arch of the pubis bone). Vaginal opening is protected by its previous position, outside the abdominal pressure line as the direction that makes the vaginal canal normal intra-abdominal pressure to close.

In order to produce static genital disorders, they were long considered as independent nosological entities with local character. Today it seems proved that static disorders have important favorable substrate neuro-dystrophic process in the woman's body tissue. This is attested in particular the existence of cases of genital prolapse in

nulliparous and even at virgins. Genital prolapse is a condition of high polymorphism related to injuries of the suspension device, especially the supportive of genitals.

Local main factors involved in producing prolapse and insufficient means of support (pelvic-perineal floor) of dystrophic, traumatic nature (rupture or dissociation of postpartum anal lifter beams) and the associated, lack of pelvic organs of passive and active support necessary to withstand normal abdominal pressure and especially the abdominal wall muscle contraction made in effort. Failure of the suspension allowing descense of the uterus after abdominal pressure action and allows uterine deviations. Misalignment and changing physiological position of the uterus (often a consequence of the weakening of the suspension system) produces an imbalance in the abdominal pressure, which in the case of the uterus located in the axis of the vagina or retro-deviated acts on the bottom of the uterus, vesico-vaginal fornix, gradually pushing the uterus in the direction of the open vaginal cavity so the uterus telescopes, gradually forming a kind of trajectory hernia.

In case of cystocele, bladder and urethra situation changes: urinary meatus retains position in relation to the bins, the urethra is moved down and back, being pulled by the bottom of the bladder that fell, bladder situated below the level of the urethra realizes an aspect in bisac, because bladder ceiling remains in place.

The bladder, due to the realized diverticulum, is discharged difficultly and often exhibits inflammatory reaction, sometimes accompanied by ascending urinary infections. Status and physiological and pathological conditions, which allow the occurrence of genital prolapse conditions, such as pregnancy, which produces a pronounced distension of the ligament suspension device, especially utero-sacral ligaments, favoring their relaxed state, appearance of retro-deviations.

Birth, through the mechanical effect of accentuated distension of the pelvic-perineal floor and especially the gap between anal lifter beams generates a dissociation of this plan, complete rupture of the perineum during some breaks or inapparent submucosal (especially if birth with dystocia, with disproportion cerebrospinal-pelvic traumatic forceps applications etc.), compromising the genital support system. Repeated birth, multiparity, with the exception of obvious injuries, it provides a relaxing state of vaginal orifice that allows the appearance of prolapse.

Also, the birth may affect the intimate relationship between the vagina and urethra, this means diminished support of the urethra, leading to a decrease in intraurethral pressure and increased urethral mobility. Confinement, particularly associated with pelvic inflammatory phenomena

with uterine sub-involution is one of the conditions causing uterus retro-deviation (heavy uterus falls back). The same way acts for repeated inflammations, pelvic congestion.

Menopause and senility by complex endocrine deficiency attracts a decrease in trophicity, tonicity and elasticity of the tissues especially in the genital area, allowing ligamentous and pelvic-perineal floor relaxation, which explains the frequency on the clinical plan of the genital prolapses during this period.

Complex factors from this mechanic (prolonged orthostatic position, heavy lifting) or patho-physiological work (prolonged cough, habitual constipation) are adjuvant elements.

Usually, because installation is chronic, phenomena installs insidiously with a sensation of heaviness sometimes dull pain, tension in the lower abdomen, vaginal fullness. In case of cystocele urinary phenomena with polakurie may occur, physical effort-related urinary incontinence (coughing, laughing, lifting weights) or permanent, signs of bladder infection or ascending. In total prolapse sometimes urination is possible only after its reduction, or by lying down.

Normally, urine continence is determined by the ratio and balance of intravesical and intraurethral pressures, which are determined by the action of smooth muscle and striated on two levels.

Micturition is a controllable reflex act. Under physiological act of micturition is the consequence of increased bladder tone and sphincter opening device.

Bladder continence is provided by the muscles of the urethra, bladder and sphincter device angulation to which the rich venous periurethral network is added.

During exercise, at healthy women, bladder base moves down and backward engaging in this direction also the bladder neck, whose lips remain closed due to juxta-urethral bladder tone, always larger than the tone of the bladder and during exercise is increased by the pelvipereineali muscle contraction.

CONCLUSIONS

- urinary incontinence is a public health problem, one of five women presenting urinary loss
- appearance time of symptoms to attending a physician is long sometimes only after 10 years, many patients considering these symptoms as part of the aging process
- it is known that with age, approximately 1% of lean muscle mass is lost every year. Because the urethral sphincter muscle and pelvic floor plays an important role in maintaining continence, it is not surprising that the prevalence of UI increases with age

- the idea that urinary incontinence occurs only in older women is not true
- Women who give birth by caesarean section without going through labor have a lower risk of developing UI and prolapse compared with those who give birth vaginally, but cesarean is not 100% protective
- episiotomy once considered as protective does not decrease nor increase the risk of UI, immediately or a few years after birth
- pelvic-tissue trauma happens mostly at first birth. Risk factors such as the use of forceps, fetuses with heavy weight for gestational age, great head circumference, labor with a long active phase expansion
- measures for prevention of genital infections and injuries, will pursue management of labor and a competent nurse in hospital units

When necessary, episiotomies or perineotomies will be done, and perineal plans will be sutured correctly. It will be treated early and adequately all acute and chronic inflammation of the genital apparatus, with pills, balneo-physiotherapy until healing.

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