

Stress incontinence

by

Donald P. C. Chan, MB, FRCS (EDIN. & GLAS.), MRCOG, MMSA (LOND.)

DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY, UNIVERSITY OF SINGAPORE.

Definition

Stress incontinence refers to the condition in which there is an involuntary loss of a little urine through the urethra when the intra-abdominal pressure is raised by laughing, coughing and sneezing, and in its worst form even by turning in bed, walking and standing. It must not be confused with true incontinence, in which there is continuous loss of urine, overflow incontinence, which is associated with prolonged and neglected retention of urine, and urgency incontinence in which almost as soon as the patient experiences a desire to void the bladder empties itself in part or whole.

Incidence

Newman and Northrup (1961) were able to elicit the complaint from 34 per cent of 1,000 women attending a gynaecological out-patient clinic: from 15 per cent of 334 nulliparous and from 43 per cent of 666 parous women. It is the impression of many that stress incontinence is less common in the East. An attempt is made to find out if this is true or if it is due to the fact that patients here are more tolerant. One hundred women attending the University gynaecological out-patient and antenatal clinics were specially interviewed and examined for this symptom. It was found, at one time or another, in 35 of these women (35 per cent). The complaint was only made by 2 but could be elicited by direct questioning in the other 33.

Aetiology

Of the 46 gynaecological patients, 10 were nulliparous and 36 parous. In the former group of patients, stress incontinence was present in 3 (30 per cent), and in the latter, it was found in

10 (27.7 per cent). This, therefore, confirms the contention of Jeffcoate (1962) that inherent or developmental weakness in the intrinsic involuntary musculature of the vesico-urethral junction is the most important of all aetiological factors.

That stress incontinence is more common during pregnancy is evident by the fact that whilst it was found in 13 of the 46 gynaecological patients (28.3 per cent), it was present in 22 of the 54 pregnant women (40.7 per cent). Francis (1960) found an even higher incidence of stress incontinence during pregnancy, 53 per cent of primigravidae and 85 per cent of multigravidae experiencing the symptom. In the present series, however, there was little difference between the incidence of stress incontinence among the primigravidae and that among the multigravidae, the figures being 37.5 per cent (9 out of 24 cases) and 43.3 per cent (13 out of 30 cases) respectively. This suggests that delivery with its associated obstetrical injuries, in contrast to pregnancy, cannot be a common causative factor.

Genital prolapse, usually in the form of just a cystocele, was present in 30 women in this series and absent in the other 70. Twenty-nine of these 30 women had had one or more vaginal deliveries, hence confirming the impression that genital prolapse, in contrast to stress incontinence, is related to childbirth. Thirteen of these 30 women had stress incontinence (giving an incidence of 43.3 per cent), whilst of the 70 who had no genital prolapse, 22 had the same complaint (31.4 per cent). And of the 35 patients who had stress incontinence, only 13 (or 37.1 per cent) had genital prolapse, hence refuting the idea that stress incontinence is often associated with prolapse. Genital prolapse cannot

be an important aetiological factor, if it is one at all.

Post-menopausal atrophy of the tissues and surgical operations in the region of the urethro-vesical junction may predispose to stress incontinence.

Diagnosis

From most of the patients, the complaint can only be elicited by a leading question. It is important to take a careful and detailed history. Time and patience are required to make sure that it is stress incontinence and not some other form of urinary symptom.

Stress incontinence should be confirmed by asking the patient to bear down and then to cough and by observing the escape of urine. It is important to make sure that the patient has not just emptied her bladder. If stress incontinence can be demonstrated, Bonney's test can be applied by placing two fingers 2.5 to 3 cm. from the introitus on the anterior vaginal wall, one on each side of the urethra. Whilst the bladder neck is being kept elevated under the pubis, the patient is asked to cough again. Control of the escape of urine by this means confirms the diagnosis and also indicates the degree of success likely to be achieved by an operation designed to elevate the base of the bladder.

Urine must be sent for microscopic examination and culture for pathogenic organisms and sensitivity tests. Cystoscopy, cystometry and urethro-cystography are helpful in some cases. They are, however, not necessary, especially in patients who have not been previously operated upon.

Treatment

Even though stress incontinence is common, the number of women in whom the symptom is bad enough to require treatment is small. Treatment is also unnecessary in many women in whom stress incontinence appears during pregnancy and disappears after delivery. It is doubtful if physiotherapy has any significant

effect on stress incontinence which is severe enough to require treatment.

If cystocele and urethrocele are present, an anterior colporrhaphy must be done. For the stress incontinence the region of the bladder neck should be dissected from the vaginal mucosa and then plicated with 2 or 3 fine silk or linen mattress sutures. If the symptom persists, a second vaginal operation with a more extensive dissection of the bladder and urethra (as described by Kennedy or Pacey) should be performed.

Urethrocystopexy or Marshall-Marchetti operation is chiefly indicated when the abdomen has to be opened for another reason. It should also be tried if 2 vaginal operations have failed.

A urethral sling operation, preferably by a combined abdomino-vaginal approach (such as the one described by Aldridge), should be attempted if vaginal repairs and urethrocystopexy have failed.

Other operations such as urethrovesicostomy and the interposition operation are of doubtful value.

Summary

Stress incontinence is defined. It must not be confused with true, overflow or urgency incontinence. It is a common complaint in women in the West as well as in the East. Aetiological factors include congenital weakness, pregnancy, delivery, genital prolapse, post-menopausal atrophy and surgical operations in the region of the urethro-vesical junction. A detailed history and a careful examination are necessary in the diagnosis. The various forms of treatment are then briefly discussed.

References

- Francis, W.J.A. (1960): J. Obstet. Gynaec. Brit. Emp., **67**, 899.
- Jeffcoate, T.N.A. (1962): Principles of Gynaecology, 2nd Edition, Butterworth & Co. Ltd., London, p.725.
- Newman, H.F. and Northrup, J.D. (1961): Amer. J. Surg., **102**, 633.