After a review of the literature on stress incontinence the importance of selecting the appropriate surgical procedure is emphasized. The long-term results of a modified and simplified method of retropubic urethropexy which has been used by the authors for 5 years are presented. The technique has been found equal in efficiency to other, more complicated, surgical methods.

The studies of the last two decades have thrown light on numerous questions of the anatomy and function of the posterior urethra and of the neck of the bladder. Yet the pathogenesis of the various forms of incontinence and the selection of optimal therapy in the individual forms still leave us with many problems. Collective reports appear from time to time on the subject in the literature. (The study by Hodgkinson published in 1965 contains 252 references.) Incontinence was one of the main topics of the Congress held by the International Urological Association (1973), and by the German Urological Association (1975) and it has been in the centre of interest ever since.

Some types of incontinence, in particular stress incontinence in females (synonyms: “Belastungsinkontinenz”, sphincter incontinence, orthostatic incontinence, functional incontinence, incompetence of closure of the bladder, partial incontinence, etc.) of minor severity, are very frequent. Kremling estimates its incidence at 50 to 52 per cent. In the majority of the cases it is not the sphincter itself, but rather the supportive tissues of the pelvic floor which are at fault. Straining associated with micturition exerts a pull on the vesical neck and on the urethra downward, which may cause a functional incompetence of the sphincter resulting in involuntary oozing of urine. A loss of tone of the pelvic supportive musculature and connective tissue may not only cause an incompetence of the sphincter area, but also a trigonocele or a marked sagging of the vesical basis, while leaving the topography of the posterior urethra and of the neck of the bladder unaffected.

The most common causative factors of stress incontinence include injuries (repeated childbirths, hysterectomy or surgery for genital prolapse) and senile disorders of innervation or of endocrine function [41], affecting the tone of the pelvic floor and thus, the kinetics of the pelvic organs. (According to Kremling [28] vaginal prolapse is associated with oozing of urine in 35 to 45 per cent of the cases.)
On the ground of the results of special investigations to be discussed later in this report, a particular type of stress incontinence has been discerned, the primary cause of which is a loss of urethral tone [5, 21]. The contemporary diagnostic methods permit to demarcate other syndromes as well: the syndromes of "Reiz-Blase" ("irritable bladder") and "urge incontinence or urethral syndrome", which are marked by a proximal urethritis in the presence of a normal anatomic situation.

Differentiation of stress incontinence from (complete) urinary incontinence of other causes (neurogenic dysfunction of the bladder, earlier surgery on the neck of the bladder or on the female genital organs, etc.) poses in general no difficulties.

It is to be noted that in a large proportion of the cases incontinence represents a combination of stress incontinence with various other causative factors [50].

Differentiation of the patho-aetiologic factors and urinary incontinence is crucial to the selection of the appropriate surgical procedure. The diagnostic possibilities serving this purpose are the following:

1. The traditional gynecologic investigations (of limited diagnostic value).
2. The traditional urological investigations: anamnestic data, laboratory studies, bacterial examination of urine, excretion urography, cystoscopy, miction cystourethrography.

Cystourethroscopy, together with the laboratory investigations may disclose proximal urethritis [35], or a prolapse of the base of the bladder. In the opinion of numerous authors, miction cystourethrography in the erect position, possibly in association with colpography [22, 43], has remained to the present day the most reliable diagnostic aid enabling us to gain insight into the morphologic situation [13, 40] and to identify the cause of incontinence [12]. It permits to locate the urethrovesical junction with reference to the pelvis in the resting state of the bladder and upon straining. It provides information on the size of the angle between urethra and base of the bladder, on the deviation of the urethra from the vertical line [40]. The length of the urethra, of high importance in the diagnosis of incontinence, is measured simply with the aid of a Foley catheter. (Daczkiewicz has found an increase of the urethra in length from 1.2 - 2.9 cm to 3.2 - 4.5 cm after the Marshall-Marchetti operation.)

3. Neurological examination is also necessary in many cases.
4. While the roentgen examinations are routinely used, additional investigations, such as special urodynamic studies [26, 34, 36, 38], cystometry, urethral pressure measurements [9, 15] and sphincter electromyography [3] may provide additional diagnostic clues. The success of therapy of urinary incontinence largely depends on the selection of the individual therapeutic methods.

Of the conservative measures perineal exercises, administration of drugs and electrostimulation for the increase of the muscular tone of the pelvic floor may be mentioned [1, 2, 6, 8, 16, 17, 23, 27]. If, on the evidence of the urodynamic studies, female incontinence is caused by a loss of urethral tone, α-sympathomimetic drugs (Midedrin, norephedrine) may be administered [4, 21]. Proximal urethritis calls for specific chemotherapy or antibiotics [35], incontinence of hormonal origin for