

# **Stress Urinary Incontinence Therapeutic Approach in the Emergency County Clinical Hospital Saint Andrew the Apostle Constanta**

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## **Abstract**

Transobturator tape (TOT) gives an excellent outcome in the treatment of stress urinary incontinence. Midurethral sling surgeries in the form of TOT surgery are the recommended treatment for stress urinary incontinence. A retrospective study was performed for a period of 5 years (2017-2021) on patients admitted to the Clinical Emergency Hospital Saint. Andrew the Apostle Constanta, on the two departments of Obstetrics- Gynecology OG I and OG II. The study was aimed to find how many of total interventions were performed using transobturator tape for stress urinary incontinence. The patients were followed according to the following criteria: age, origin, symptoms.

**Keywords:** Transobturator Tape, Stress Urinary Incontinence, Urogynecology

## Introduction

Stress urinary incontinence is the unintentional passing of urine when the body is in distress such as cough or laugh. It is a problem that affect millions of women (System, 2001).

In the United States approximately 13 million people suffer from this kind of dysfunction, stress urinary incontinence being less prevalent in men than in women (Luber, 2004).

Some authors state that stress urinary incontinence (SUI) prevalence is variably estimated between 4% and 35% of adult women (Thom, 1998).

The International Continence Society's tried to create a standardization of terminology for lower urinary tract dysfunction in order to make possible a future calculation of real prevalence for this kind of disease (Abrams et. al., 2003).

The main sign and symptom of stress urinary incontinence is described as "the complaint of involuntary leakage on effort or exertion, or on sneezing or coughing" (Abrams et. al., 2003).

Stress urinary incontinence may also be associated with depression and anxiety, particularly in the elderly patients with an urge component but also in young people (Dugan et. al, 2000).

Principal risk factors for stress urinary incontinence are represented by aging, the dysfunction becoming more relevant after the installation of menopause, obesity, the increased Body Mass Index, resulting in an increased intra-abdominal pressure and leading to weakening of the pelvic floor innervation and musculature failure and smoking whereas the roles of pregnancy and childbirth remaining controversial (Luber, 2004), (Osborn et. al. 2013).

Other risk factors may include estrogens depletion, delirium, stroke, medication, such as diuretics, Beta- or Alpha-adrenergic agonists, Caffeine or alcohol (Hannestad et. al., 2000).

For the diagnosis of stress urinary incontinence, there are some urodynamic analyses that should be performed, like the stress pad test, when the wears a urinary pad and performs some activities that could trigger urinary leakage. The test is considered positive when there is 1ml of urine after one hour or 4 ml of urine after 24 hours (Krhut et. al., 2014).

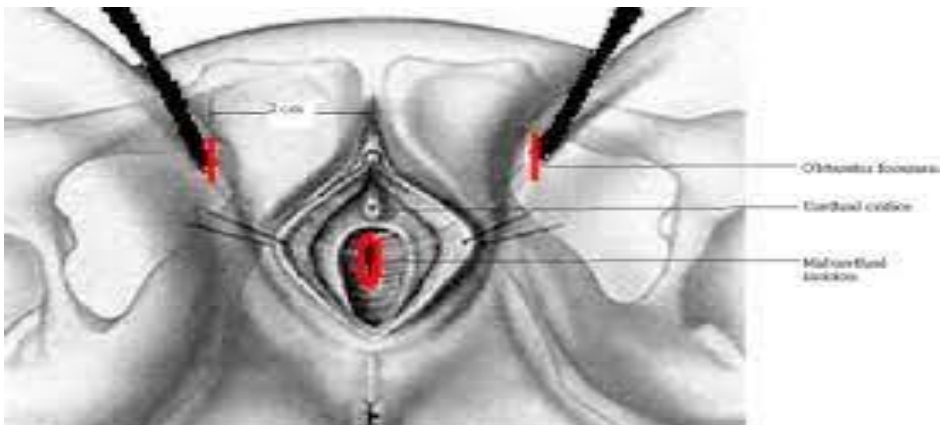
Although urodynamics has been regarded as a valuable test in elucidating the underlying mechanism of urinary incontinence, findings must be correlated with the patients' symptoms (Powell et. al., 1981).

A urinalysis should be performed on all patients with incontinence, from the midurine, to rule out pyuria (infection), hematuria (infection, stones, or cancer), proteinuria (renal disease), and glycosuria (diabetes) (Deutchman et. al., 2005).

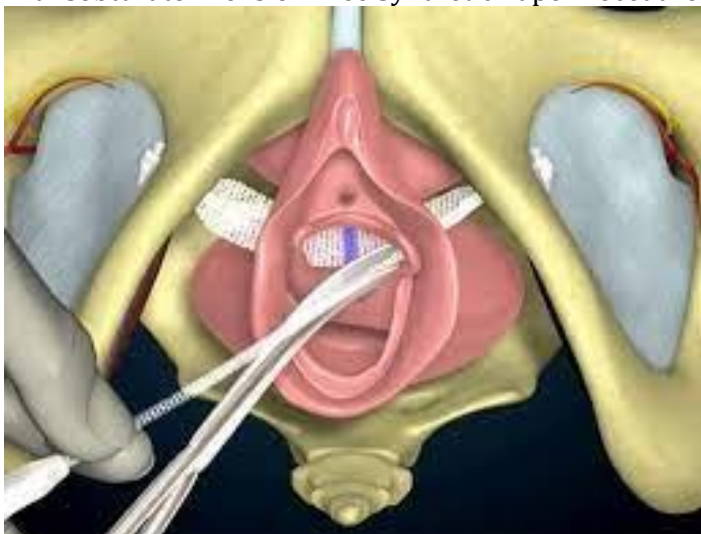
The treatment for stress urinary incontinence may be medical at the beginning, including topical estrogens, behavioral therapy, Alpha- adrenergic or anticholinergic medication (Kershen et. al., 2004).

Non-surgical mechanical treatments include pessaries that elevate the mid urethra, urethral occlusive devices, weighted vaginal cones that provides sensory feedback during pelvic floor muscle exercise like Kegel exercises (Godman, 2014), (Ward et.al., 2002).

The surgical treatment includes plenty of methods for the management of Stress Urinary Incontinence, from the Burch colposuspension, to midurethral sling using autologous materials, transvaginal tension-free synthetic tape (TVT) and Transobturator tension free synthetic tape (TOT) (Ward et.al., 2002), (Latthe et. al., 2007).



Transobturator Tension Free Synthetic Tape Procedure (Wang et. al., 2016)



Transvaginal Tension Free Synthetic Tape Procedure (Braga et. al., 2018)

Transvaginal Tension- Free Tape and Trans-obturator Tension Free Tape are the most cost-effective primary procedures, retaining the success and cure rates associated with colposuspension but with decreased morbidity, shorter hospital stay and quicker return to work (Ward et. al., 2008).

### **Material and Method**

The present study was aimed to analyze the incidence of stress urinary incontinence and the Trans-obturator Tension Free Tape using interventions in the Clinical Emergency Hospital Saint Andrew the Apostle Constanta within the Obstetrics-Gynecology I and II departments.

The study was a retrospective one, over a period of 5 years, between 01.01.2017 and 31.12.2021, and the data were collected from the observation sheets and from the operative protocols of the two departments.

Between 01.01.2017 and 31.12.2021, a total number of 14,250 patients were admitted to the Obstetrics-Gynecology I and Obstetrics-Gynecology II departments, 3746 patients on the gynecology department

The total number of patients included in the study was 93, all of whom presented to the hospital for symptoms mainly related to the symptoms of stress urinary incontinence.

The incidence of stress urinary incontinence in the period presented was **2.48%** of all hospitalizations in the two departments of Obstetrics-Gynecology.

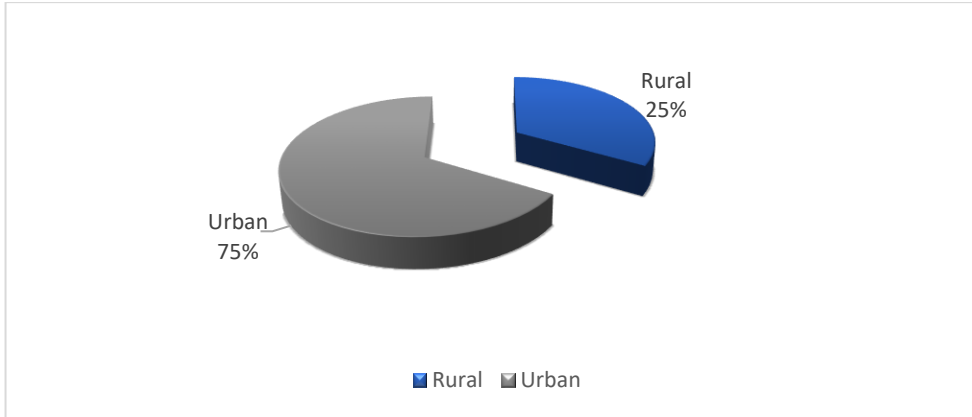
Out of 3746 patients admitted on the gynecology department, 93 were diagnosed with stress urinary incontinence.

### **Distribution of the studied batch by provenance environment**

The studied batch of patients was divided into rural and urban environments.

**Table 1. Distribution of the studied group by provenance environment**

	Frequency	Procent
Rural	23	25%
Urban	70	75%
Total	93	100%



**Graphic 1. Distribution of the studied group by provenance environment**

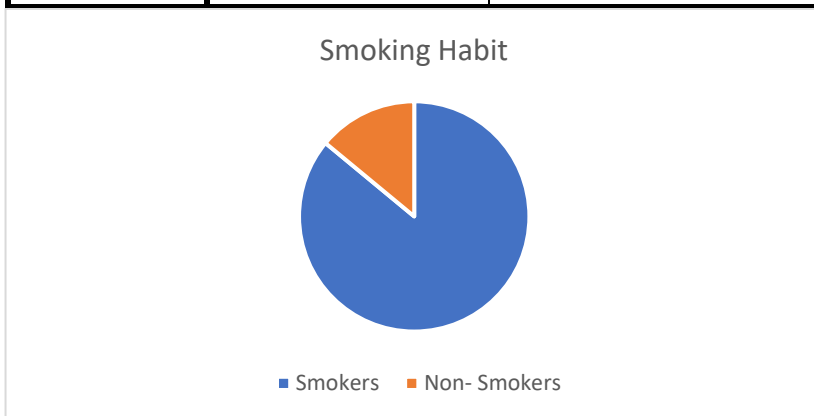
Both from the table above and from the graphic representation, a higher incidence of stress urinary incontinence can be observed in the urban population. Urban population incidence is 75%, compared to the rural population, which is only 25% of cases. These results can be explained by the low addressability of rural women to the gynecologist compared to urban women.

### Distribution of the studied group by smoking habit

The studied over the five years was classified into groups of smokers and non-smokers.

**Table 2. Distribution of the studied group by smoking habit**

A	Number of Patients	Incidence
Smokers	80	86 %
Non- Smokers	13	14 %
Total	93	100%



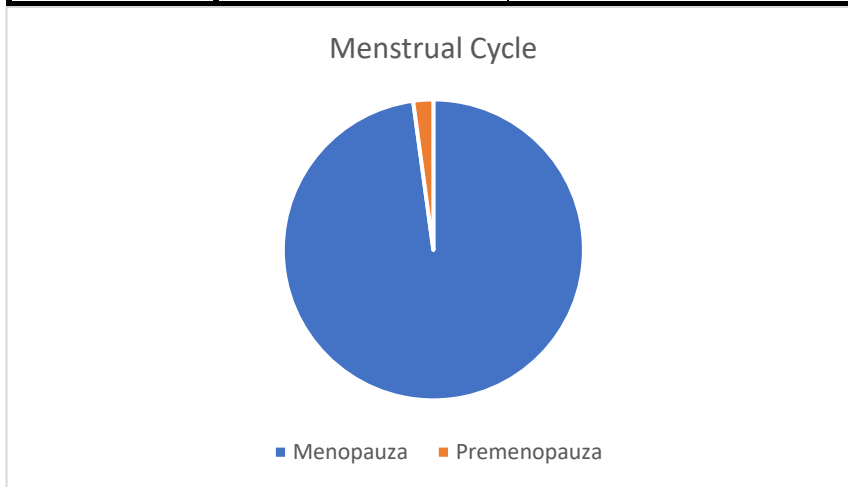
**Graphic 2. Distribution of the studied group by smoking habit**

It can be seen from the graphic analysis above that the highest incidence of symptoms related to stress urinary incontinence is in **the smokers group**.

### Distribution of the studied group by menstrual period

**Table 2. Distribution of the studied group by menstrual period**

A	Number of Patients	Incidence
Menopause	91	97.85 %
Pre- Menopause	2	2,15 %
Total	93	100%



**Graphic 2. Distribution of the studied group by menstrual period**

It can be seen from the graphic analysis above that the highest incidence of symptoms related to stress urinary incontinence is in **the menopausal patients group**, most of the time, in this age period overlapping both the associated symptoms of estrogen absence, and that associated with menopause atrophy.

### Discussions

Stress Urinary Incontinence occupies a very well-defined place in gynecological practice. The incidence of this kind of pathology in the Emergency County Clinical Hospital "Saint Andrew the Apostle" Constanta was **2.48%**. Some authors state that stress urinary incontinence (SUI) prevalence is variably estimated between **4% and 35%** of adult women [1]. Probably the low incidence from our study is due to CO-VID 19 pandemic and to low addressability of patients regarding this kind of pathology

It can be seen from the graphic analysis above that the highest incidence of symptoms related to stress urinary incontinence is in **the menopausal patients group**, most of the time, in this age period overlapping both the associated symptoms of estrogen absence, and that associated with menopause atrophy.

It can be seen from the graphic analysis above that the highest incidence of symptoms related to stress urinary incontinence is in **the smokers group**. Studies suggest a strong statistical relationship between current and former cigarette smoking and both stress and motor urinary incontinence in women (Bump et al., 1992).

## Conclusions

Preferred surgical intervention for the stress urinary incontinence in the Emergency Clinical Hospital " Saint Andrew the Apostle " Constanta was Transobturator Tension Free Synthetic Tape Procedure.

The procedure needs special skills of urogynaecology in order to be performed and a special type of tape, but its outcome is the best surgical way for solving this kind of disfunction.

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