ESTRATTO DA:
UROGYNAECOLOGIA INTERNATIONAL JOURNAL 2000; 14; 1 : 11-14

TOPICAL ESTROGENIC THERAPY AND URGENCY/FREQUENCY SYNDROME

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Key words: Topical estriol, urgency/frequency syndrome, menopause

SUMMARY: *In this study we elected postmenopausal patients suffering from urgency/frequency syndrome. Estriol in the form of vaginal cream was applied for a total of fifteen weeks. The outcome was positive (cured or rimproved) in 89.3 of cases.*

INTRODUCTION

The urethral syndrome characterized by urgency, frequency, dysuria, pain and suprapubic tenesmus, is the result of irritation of the thin urethral mucosa. In particular, urgency and frequency can be caused by atrophic thinning of the trigonum, which embryologically derives from estrogen-dependent tissue (1) (2). The purpose of our research was to assess the efficacy of a topical, vaginal, estrogen replacement treatment in women at menopausal age, suffering from urgency/frequency syndrome with unknown etiology.

Therapeutic options in topical estrogen therapy include the use of: conjugated estrogens, promestriene or estriol. We adopted estriol which, contrary to the other steroids, is a natural female hormone with poor endometrial trophism and shorter lasting action, and thus does not give rise to uterine mucous proliferation with resulting inter-menstrual flow. Estriol is also "biologically" the weakest hormone. In fact, in order for it to achieve its biological effect the hormone-receptor complex must remain in the nucleus for a long time: estriol disappears from the nucleus more rapidly than the powerful estradiol (3). Nonetheless, system absorption of estriol can be obtained, even if applied vaginally, with a resulting sense of mammary tension and excessive production of cervical mucous.

MATERIALS AND METHODS

We selected 56 patients attending the Urodynamic Service at our Institute, aged between 47 and 74 years, in post-menopause for at least one year and suffering from urgency/frequency syndrome, pollakiuria and nycturia. Regarding the menopausal age we subdivided patients into 3 groups: group 1 - post-menopause from 1 to 5 years, group 2 - from 6 to 10 years, group 3 - over 11 years.

71.4% of patients complained of slight urinary incontinence. None of the selected patients had at any time previously undergone hormonal replacement therapy, nor were there contraindications to the treatment for them. The average height of the women under examination was 158 cm (range 145-170), average body weight was 63 Kg (range 45-83). The post-menopausal age was between 1 to over 11 years.

We applied estriol in the form of vaginal cream as follows:

one application of 4 g. of cream on seven consecutive evenings, two weekly applications in the subsequent three weeks, 7 days' suspension of treatment and then the treatment cycle recommenced for a total of fifteen weeks. Patients were assessed before and after treatment through history, objective urogynecologic examination, stress test, PC test, urinoculture and urodynamic examination (uroflowmetry, water cystomanometry, UPP).

RESULTS

On termination of treatment for the urgency/frequency syndrome, the outcome was positive (cured or improved) in 89.3% of cases, whereas urinary incontinence was reduced in 51% of cases (Table 1).

We regard the cure as being the disappearance of urgency, a daytime urination number below 7 and no more than one urination at night. Improvement is a reduction of symptoms compared to the start. Changes in urodynamic parameters are reported in Table 2.

Table 1: *Result of estrogenic topic therapy.*

	Positive outcome	Negative outcome	P
Urgency/frequency	89,3%	10,7%	<0,01
Urinary inc.	51%	49%	N.S.

Table 2: *Urodynamic parameters.*

	Before Therapy	After Therapy	P
1st urin. stimulus	110 + 40	140 + 45	N.S.
ur.urge stimulus	270 + 15	310 + 20	N.S.
Q med	8,5 + 4,1	10 + 5,2	N.S.
Q max	19,5 + 8,8	22,6 + 10	N.S.
post void. residual vol.	70 + 35	55 + 30	N.S.

After treatment the 1st urinary stimulus and urinary urge stimulation occur with greater bladder fill volumes; moreover the mean and maximum urinary flow increases, whereas post voiding residual volume decreases.

There are differences between the three post-menopausal age groups. The older the patient the higher the percentage of negative results (Tab. 3). In 2% of cases side-effects were observed i.e. mammary tension and itchiness (without mycetes) Tab.3.

Table 3: *Estrogenic therapy results in the 3 groups of postmenopausal patients with urgency/frequency syndrome.*

	Cured	Improved	Neg. outcome
1 Group (20 pat.)	16 (80%)	4 (20%)	//////////
2 Group (18 pat.)	11 (61,1%)	5 (27,8%)	2 (11,1%)
3 Group (18 pat.)	7 (38,9%)	7 (38,9%)	4 (22,2%)

CONCLUSIONS

The beneficial effect of the supplementation therapy in women in menopausal age is undisputed whereas treatment duration is not so clearly defined. The data available suggest that the protective effects of estrogen only last during the treatment period, hence women in post-menopause should take treatment all their lives. However, one study has revealed that only 30% of women show good compliance to this type of prescription, 20-30% do not comply, 20% suspend treatment in the first nine months and 10% perform treatment intermittently (3). Our positive results on urinary symptomatology in most cases lead us to suggest topical estrogen therapy at least as an initial approach treating to urgency/frequency syndrome.

REFERENCES

1 - FREWEN W.K.:
The Management of urgency and frequency of micturition.
Br. J. Urol. 52; 367-369; 1980.

2 - RIGG L.A., HERMANN A., YENS S.C.:
Absorption of estrogens from vaginal creams.
N. Engl. J. Med. 1978; 298:195.

3 - CLARK J.H., HARDIN J.W., MC CORMACK S.A.:
Estrogen receptor binding and growth of the reproductive tract.
Pediatrics 1978; 62, 1121.

4 - RAVNIKAR V.A.:
Compliance with hormonal therapy.
Am. J. Obstet. Gynaecol. 1987; 156: 1332.

5 - CARDOZO L.D., KELLERHER C.J. :
Sex hormones, the menopause and urinary problems.
Gynecol Endocrinol 9, 1995.