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بالرسالة صفحات
لم ترد بالأصل

Menoufyia University
Faculty of Medicine
Department of Obstetrics & Gynecology

**COMPARATIVE STUDY OF THE EFFECT OF
INTRAVESICAL INSTILLATION OF PROSTAGLANDIN
E₂ AND F_{2α} ON THE LOWER URINARY TRACT IN
HEALTHY WOMEN
(A URODYNAMIC STUDY)**

A Thesis

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ABBREVIATIONS

PG	Prostaglandin
Max	Maximum
Urethr	Urethrol
Det. pr. at cys. cap	Detrusor pressure at maximum cystometric capacity.
Det. pr. at Max. det. pr	Detrusor pressure at maximum detrusor activity
Det. pr. at relax	Detrusor pressure at relaxation
Cys	Cystometric
Det	Detrusor
Sens	Sensation
Cys-cap.	Cystometric capacity

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Introduction

INTRODUCTION

The lower urinary tract has two functional units: the bladder and the bladder outlet. To maintain continence the bladder acts as a low pressure storage reservoir and the outlet acts as a barrier to outflow of urine (Bavendam *et al.*, 1991).

Micturition is based on two fundamental mechanisms, contraction of the detrusor muscle, and the reciprocal relaxation of the muscle of the upper urethra (Bradley, 1990).

Disorders of micturition may be divided into:

1. Disturbances of the storage function of the bladder; frequency, urgency and incontinence.
2. Disturbances of the emptying function of the bladder, retention. (Andersson, 1988).

The drug therapy is aimed at improving the contractile activity of the detrusor or reducing urethral outflow resistance (Andersson, 1988).

Prostaglandins are known to have positive inotropic effect on smooth muscles, including the detrusor muscle. (Desmond *et al.*, 1980 and Klarskov *et al.*, 1983).

The effect of primary prostaglandins on the dome and trigone of the human urinary bladder were investigated *in vitro*:

1. In the dome preparations, prostaglandin E_2 produced dose- dependent contractions while prostaglandin $F_{2\alpha}$ produced contractions greater than those produced by prostaglandin E_2 .

Introduction

2. In the trigone preparations, prostaglandin E_2 produced weak contractions while prostaglandin $F_2\alpha$ produced greater contraction potency (Ueda *et al.*, 1985).

The contractile effects of prostaglandin on urinary bladder is not mediated by activation of muscarinic, nicotinic or adrenergic α -receptors (Ueda *et al.*, 1985).

The effects of prostaglandins seem to be directly myogenic since cholinergic and adrenergic blockers did not affect them (Abdel-Hakim *et al.*, 1983).

Induction of detrusor contractility can be produced by prostaglandin $F_2\alpha$ (Oscar *et al.*, 1985).