The Value of Nitric Oxide Donors for The Ripening the Cervix Uteri

Thesis

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بسم الله الرحمن الرحيم

قالوا

سبحانك لا علم لنا إلا ما علمتنا

إنك أنت العليم الحكيم

صدق الله العظيم

الآية (٣٢) سورة البقرة

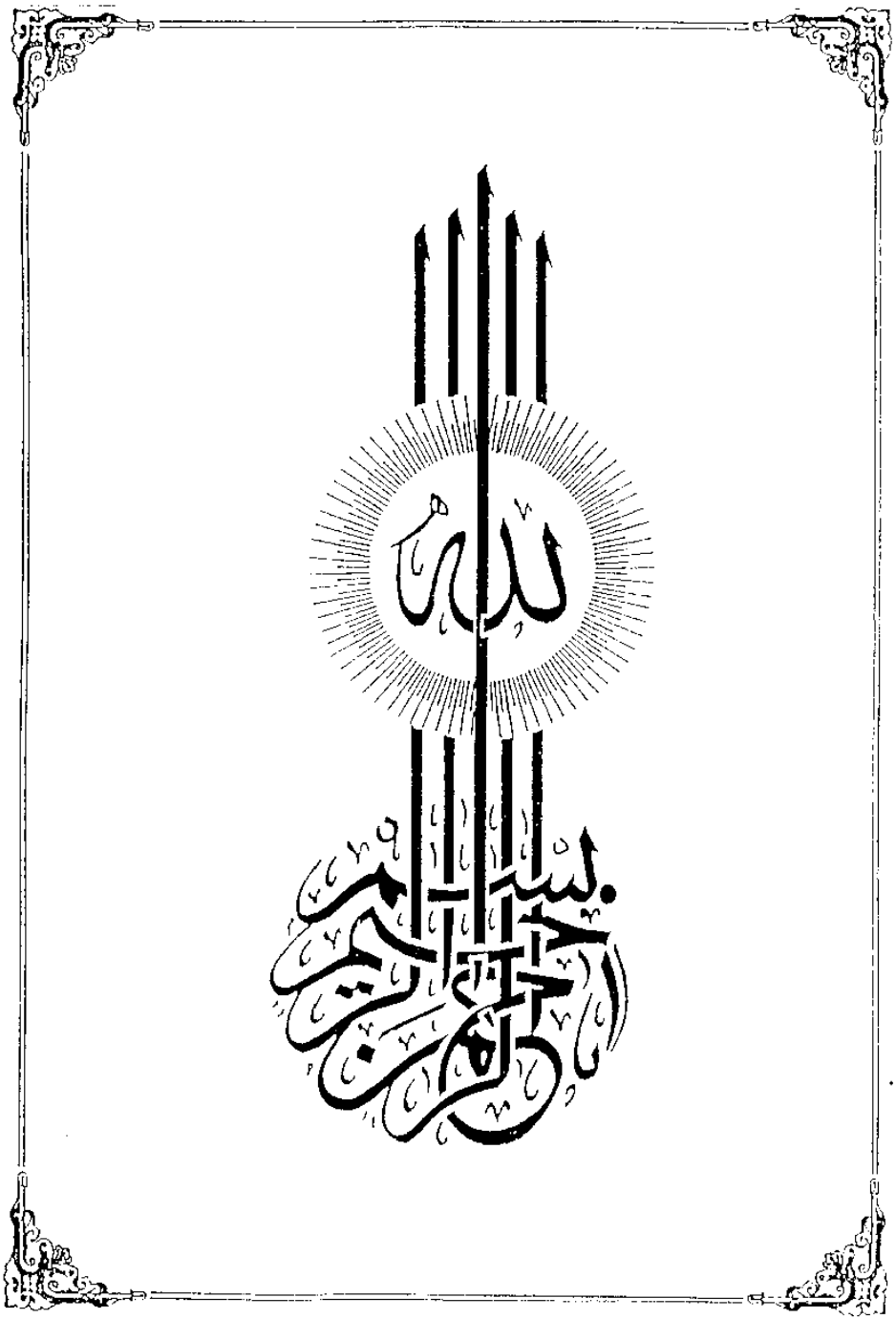

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

ADMA	=	Asymetric dimethyl L-arginine
Bl.Pr.	=	Blood pressure
BS	=	Bishop score
c-GMP	=	Cyclic guanosine monophosphate
cNOS	=	Constitutive nitric oxide synthase.
COX	=	Cyclo-oxygenase
DNA	=	Deoxy-ribonucleic acid
ED	=	Endothelial dysfunction
EFS	=	Electric field stimulation
eNOS	=	Endothelial nitric oxide synthase
GAG	=	Glycosaminoglycans
GTN	=	Glyceril triinitrate
HPV	=	Hypoxic pulmonary vasoconstriction
IGF	=	Insulin like growth factor
IL	=	Interleukins
iNOS	=	Induced nitric oxide synthase
ISDN	=	Isosorbid dinitrate
ISMN	=	Isosorbid mononitrate

ISTN	=	Isosorbid trinitrate
IUD	=	Intrauterine device
IUFD	=	Intra uterine fetal death
IUGR	=	Intra uterine growth retardation
LDL	=	Low density lipoprotiens
L-NAME	=	N^G-Nitro-L-arginie methyl ester.
L-NMMA	=	N^G-monomethyl-L-arginine.
LT	=	Leukotriens
LX	=	Lipoxin
m-RNA	=	Messenger ribo neucleic acid
NANC	=	Non adrenergic – non cholinergic.
nNOS	=	Neuronal nitric oxide synthase
NO	=	Nitric oxide
NOS	=	Nitric oxide synthase
PCR	=	Polymerase chain reaction
PG	=	Prostaglandins
RPMC	=	Rat peritoneal mast cells
SNP	=	Sodium nitroprusside
TNF	=	Tumor necrosis factor.
TX	=	Thromboxane

ABSTRACT

Objectives

To investigate the role of vaginally administered nitric oxide donors as potentially beneficial drugs for the process of cervical ripening, and to compare their effect with that of misoprostol in this respect.

Study design

A prospective comparative study.

Setting

- Ain Shams Maternity Hospital
- Damietta Specialized Hospital.

Patients and methods

The study included 120 patients, they were divided into 3 groups, group A included 40 patients pregnant in the first trimester of pregnancy, Group B included 40 patients pregnant in the second trimester and Group C included 40 non-pregnant patients scheduled for gynecological operations necessitating cervical dilatation at the start.

In each group 50% of the patients were randomly treated by ISMN 40 mg vaginal tablet and the other 50% were treated by misoprostol 200 ug vaginal tablet.

Results after 4 hours of administration of ISMN 40 mg and misoprostol 200 ug were as regard the gain in cervical canal diameter in group A was (2.90 ± 1.49) and (1.85 ± 1.42) respectively.

As regard the gain in total Bishop score in group B was (1.45 ± 1.39) and (1.65 ± 1.18) respectively.

While as regard the gain in cervical canal diameter in group C was (2.60 ± 0.24) and (2.60 ± 0.27) respectively.

Conclusion

The results of this study indicated that NO donors (ISMN) can offer a cheaper, safe and effective alternative to misoprostol as a cervical ripening agent whether in the first and second trimester of pregnancy or in non-pregnant before gynecological operations necessitating cervical dilatation