شبكة المعلومات الجامعية

بسم اللّه الرحمن الرحيم

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التوثيق الالكتروني والميكروفيلم

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التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها

علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

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بعض الوثائق الأصلية تالفة

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بالرسالة صفحات

لم ترد بالأصل

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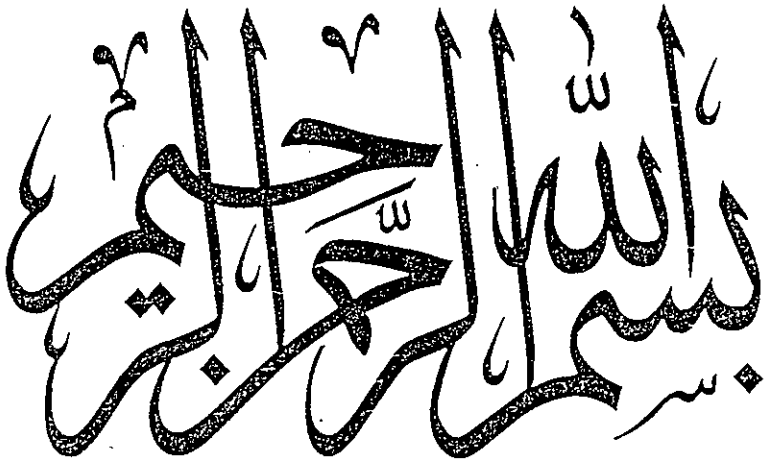
بسم الله الرحمن الرحيم

EVALUATION OF THE USE OF MISOPROSTOL (METHYL-11 α,16-DIHYDROXY-16-METHYL, 9-OXOPROST-13 E-en-1-oate) ORALLY AND VAGINALLY IN ACCELERATION OF LABOR IN PRIMIGRAVIDAE

Thesis

Submitted to the Faculty of Medicine
University of Alexandria
In partial fulfillment of the
Requirements of the degree of

MASTER OF OBSTETRICS AND GYNAECOLOGY

By

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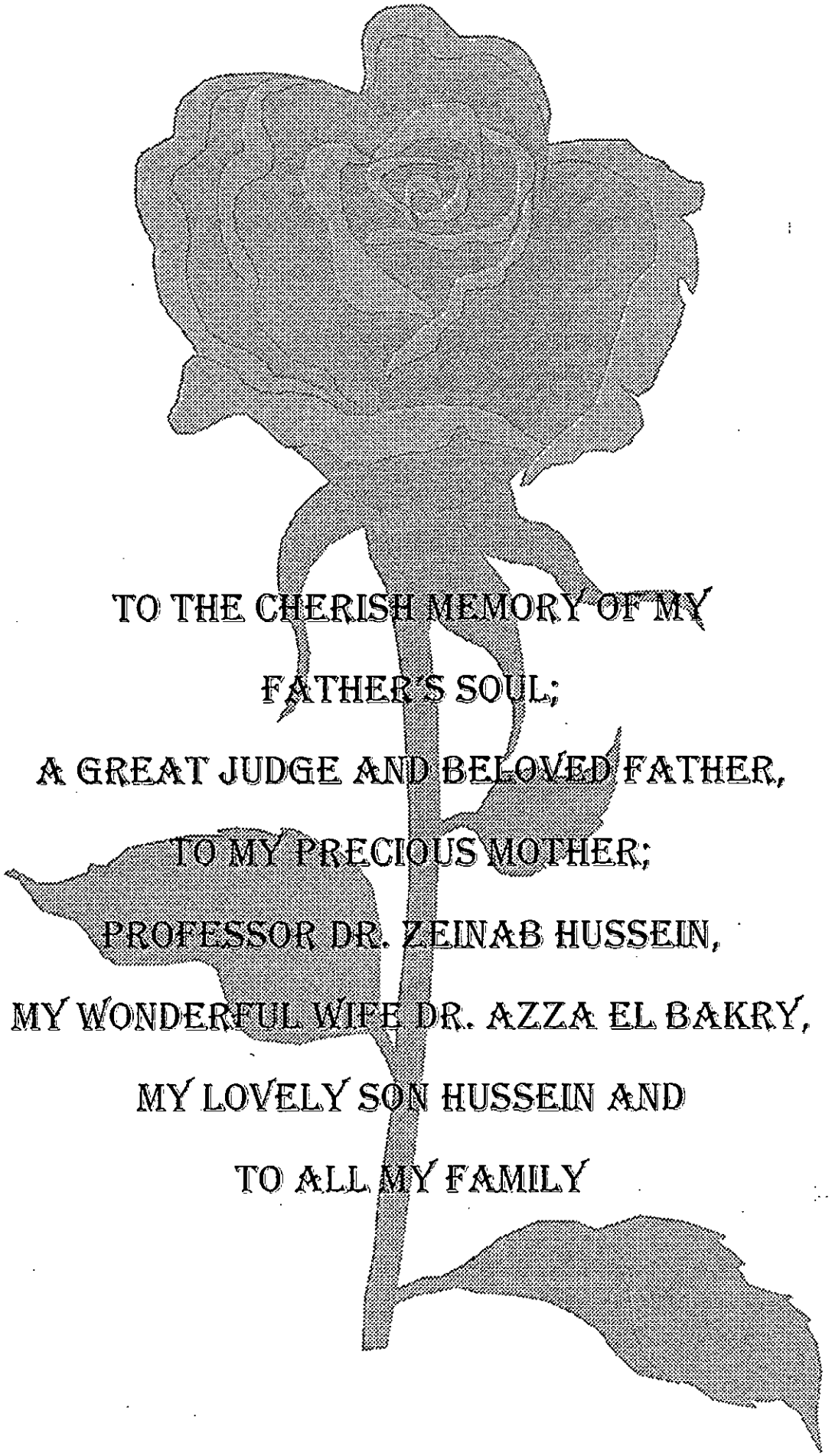

TO THE CHERISH MEMORY OF MY

FATHER'S SOUL;

A GREAT JUDGE AND BELOVED FATHER,

TO MY PRECIOUS MOTHER;

PROFESSOR DR. ZEINAB HUSSEIN,

MY WONDERFUL WIFE DR. AZZA EL BAKRY,

MY LOVELY SON HUSSEIN AND

TO ALL MY FAMILY

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INTRODUCTION

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Augmentation of labor refers to stimulation of uterine contractions when spontaneous contractions have been considered inadequate, with resultant failure of progressive cervical dilatation or descent of the fetus.[1]

The cervix is the primary soft tissue structure offering resistance to pogress in the first stage.[2] The physical state of the cervix affects the generation of intrauterine pressure, so that a compliant cervix will attenuate to the pressure and a non compliant cervix will augment the generated pressure.[3]

The concept of cervical resistance was developed by Crawford who implied that rapid delivery could be a consequence of low resistance rather than high myometrial activity.[4] This concept is consistent with the finding that precipitate labor may be associated with low levels of uterine activity.[5]

Physiology of the cervix

In the cervix, there are three main structural components: Smooth muscle, collagen and ground substance. The smooth muscle contributing only to 15% of the composition of the organ

and has no apparent role in the ripening process. The predominant components of the cervix are the collagen and the ground substance, both of which play an important role in cervical ripening.[6]

Cervical ripening is associated with two principle events: the first event is collagen breaking down which is accounted for by proteolytic action of collagenases.[7]

The second event is a change in the relative amounts of the various glycosaminoglycans in the ground substance (near term there is a striking increase in hyaluronic acid which is associated with the capacity of the tissue to retain water, together with decrease in cervical dermatan sulfate).[8]

Myometrial smooth muscle

Anatomical features

There are unique anatomical features of myometrial muscle and other smooth muscles different from those of skeletal muscle. These features create a peculiar advantage for myometrial smooth muscle in the development of uterine contractions and the delivery of the fetus. The first feature is the degree of shortening in smooth muscle cells with contraction which is greater than that attained in striated muscle cells. The second feature is that forces can be

exerted in smooth muscle cells in any direction, whereas the contraction force generated by skeletal muscle is always aligned with the axis of the muscle fibers. The third feature is that the smooth muscle in the myometrium is organized in a manner that the thick and thin filaments are found in long, random bundles throughout the cells. This arrangement facilitates the greater shortening and force-generating capacity of smooth muscle. Finally the special arrangement of the myometrial smooth muscle permits the generation of a multidirectional expulsive force, irrespective of the lie or presentation of the fetus.[9]

Characteristics of uterine contractions of labor

Unique among physiological muscular contractions, those of uterine smooth muscle of labor are painful. Therefore, the common designation, in many languages, for such a contraction is "pain". The cause of the pain is not known definitely, but several mechanisms have been suggested: (1) hypoxia of the contracted myometrium (as in angina pectoris), (2) compression of nerve ganglia in the cervix and lower uterus by the tightly interlocking muscle bundles, (3) stretching of the cervix during dilatation, and (4) stretching of the peritoneum overlying the fundus.[9-13]

Uterine contractions are involuntary and for the most part independent of extrauterine control.