بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــســـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

Evaluation of predictors of chorioamnionitis in cases of prelabour rupture of membranes at term.

Thesis
Submitted to the faculty of medicine
Alexandria University
In partial fulfillment of the degree of

MASTER OF OBSTETRICS AND GYNECOLOGY

By

Dr. AHMED Fawzy Ebrahim Galal
M.B.B.Ch

Obstetric and gynecology department
Faculty of Medicine
Alexandra University
2002

SUPERVISORS

Prof. Dr Mohamed Mohamed Osman

Professor of Obstetrics and Gynaecology
Faculty of Medicine
Alexandria University

Prof. Emad Darwish

Professor of Obstetrics and Gynaecology
Faculty Of Medicine
Alexandria University

Assistant Prof. Dr. Hesham Galal

Assistant Professor of Obstetrics and Gynaecology
Faculty of Medicine
Alexandria University

Co- Worker

Dr. Magdi Abdel Hamid

Chairman of Department of Clinical Pathology
Alexandria University Hospital

ACKNOWLEDGEMENT

Praise be to ALLAH, The most Cherisher and Sustainer of the Worlds for completing this work.

I wish to express my deepest thanks and appreciation to Prof.Dr. Mohamed Osman, Professor of Obstetrics and Gynaecology, Faculty of Medicine, Univeristy of Alexandria, for his constructive advice and guidance during supervising this work.

I would like to express my sincere gratitude to Prof.Dr. Emad Darwish Professor of Obstetrics and Gynaecology, Faculty of Medicine, University of Alexandria, for his generous help and kind support throughout the study.

I am also grateful to Ass. Prof. Dr. Hesham Galal, Assistant professor and Gynaecology, faculty of Medicine, University of Alexandria, to whom I am deeply indebted for the time he spent, his extreme patience and meticulous instructions throughout the work.

I am also grateful to Dr. Magdi Abdel Hamid, chairman of Department of Clinical Pathology , University Hospital , Alexandria University. for his generous help and kind support throughout the study.

I would like to thank the patients involved in this study for their kind acceptance to be included in the work and their perfect compliance to out demands.

Last, but certainly not least, I would like to express my gratitude to the members of my family for their utmost care, kind support and continuous encouragement to accomplish this work.

CONTENTS

INTRODUCTION

Developmental Considerations of Foetal membranes

1-*The amnion:*

The amnion at term is a tough and tenacious but pliable membrane. It is the innermost foetal membrane of the "bag of water", being contiguous with the amniotic fluid. It is the tissue that provides almost all of the tensile strength of the foetal membrane. (1)

Early in the process of implantation, a space develops between the embryonic cell mass and adjacent trophoblasts. Small cells that line this inner surface of trophoblasts have been called amniogenic cells, the precursor of amniotic epithelium. The human amnion is first identifiable about 7^{th} or 8^{th} day of embryo development. Initially, a minute vesicle develops into a small sac that covers the dorsal surface of the embryo. As the amnion enlarges, it gradually engulfs the growing embryo, which prolapses into its cavity (Benirschke and kaufman 1990). (2)

Distension of the amniotic sac eventually brings it into contact with the interior surface of the chorion laeve, apposition of the mesoblasts of chorion

laeve and amnion near the end of the 1st trimester causes an obliteration of the extra-embryonic coelom. The amnion and chorion laeve, though slightly adherent, are never intimately connected, and usually can be separated easily, even at term. (1)

2- ***The chorion:***

it consists of an outer layer of trophoblast and an inner layer of primary mesoderm. The trophoblast undergoes rapid proliferation. The 1st villi are formed by the strands, which intervene lacunar spaces of the trophoblastic envelope, but further villi are outgrowth from them. Foetal mesoderm and vessels invade the villi. Blood is carried out from the embryo to the chorion by the umbilical arteries, and after circulating through the capillaries of chorionic villi , is returned to the embryo by umbilical veins.

From the 3rd week until about the end of 2nd month of pregnancy, the entire chorion is covered with villi that project into the decidua basalis and decidua capsularis. Those of decidua basalis are larger and show more numerous branches than those of decidua capsularis, with growth of the embryo and expansion of amniotic cavity, the decidua capsularis is thinned and compressed, the circulation through it is gradually cut off, and the villi of the corresponding part of the chorion becomes smooth (chorion laeve) and as it takes no share in the formation of the placenta, it is sometimes named the

non-placental part of the chorion. On the other hand, the villi on that part of the chorion which is in contact with the decidua basalis increases greatly in size and complexity, and named *chorion frondosum.* It constitute the placental area and here the intervillous space becomes expanded at the expense of the stratum compactum and superficial part of the stratum spongiosum.[3]

Histological consideration of foetal membrane

1- ***The amnion:***

Bourne in (1962) described 5 separate layers of amnion tissue.

The inner surface, which is bathed by the amniotic fluid, is uninterrupted single layer of cuboidal epithelial cells, believed to be derived from embryonic ectoderm, attached firmly to distinct basement membrane. That is connected to the acellular compact layer, which is composed primarily of interstitial collagen I, III; V on the outer side of the compact layer, there is a raw of fibroblast- like mesenchymal cells (which is widely dispersed at term). There are also few foetal macrophages in the amnion. The outermost layer of amnion is the relatively acellular ***zona spongiosa*** which is continuos with the second foetal membrane, ***the chorion laeve.*** [4]

2- ***The chorion:***

The chorion (non- placental) is made of four layers of cells namely cellular layer, reticular layer, pseudobasement membrane and trophoblast from within outward. [5]

Gross anatomy of foetal membrane at term

The uterine cavity at full term is ovoid in shape, reaching from the fundus to the internal os. The whole uterine living membrane i.e. the decidua, is in contact with the outer surface of the chorion and its continuation, the placenta. Inside the chorion are the amnion, and the two membranes form the sac containing the liquor amnii and the foetus.

The amnion is the innermost of the two membranes and, lies in contact with the contents of the sac, namely amniotic fluid and the foetus. It is a thin, transparent, silvery, glistening and tough membrane. [6] The part of the membrane that lines the inner aspect of the placenta is *the* ***placental amnion*** while the remainder is referred to as ***the reflected amnion.*** The area of the amnion within two inches of the placental edge is called ***the periplacental amnion***. The part of membrane that directly overlies the internal os and which cover an area about two square centimeters around is known as ***the dependant membrane.*** The center of this circular area will be lying over the precise site of internal os is called ***the cervical membrane.*** [7]

The chrionic membrane, which is adjacent to the surface of the amniotic membrane, separates the amnion from the decidua of the uterus.[7]