CYTOLOGIC FINDINGS IN ASCITES: THEIR RELATION TO THE PATHOLOGY OF OVARIAN TUMOURS

THESIS

SUBMITTED FOR THE DEGREE OF

Ph.D. (PATHOLOGY)

Presented by

MAGDA HASSAN ABDEL HAMID NASR EL DIN

M.B.B.Ch., Sc.(PATHOLOGY)

SUPERVISED BY

PROF. Dr. MOURAD ALI SHERIF
PROFESSOR OF PATHOLOGY

PROF. Dr. MOHAMMAD BAYOUMI SAMMOUR
PROFESSOR OF OBST. & GYN.

Dr. NADIA BAYOUMI
ASSISTANT PROF. OF PATHOLOGY

FACULTY OF MEDICINE

AIN SHAMS UNIVERSITY

1986

2649

ACKNOWLEDGEMENT

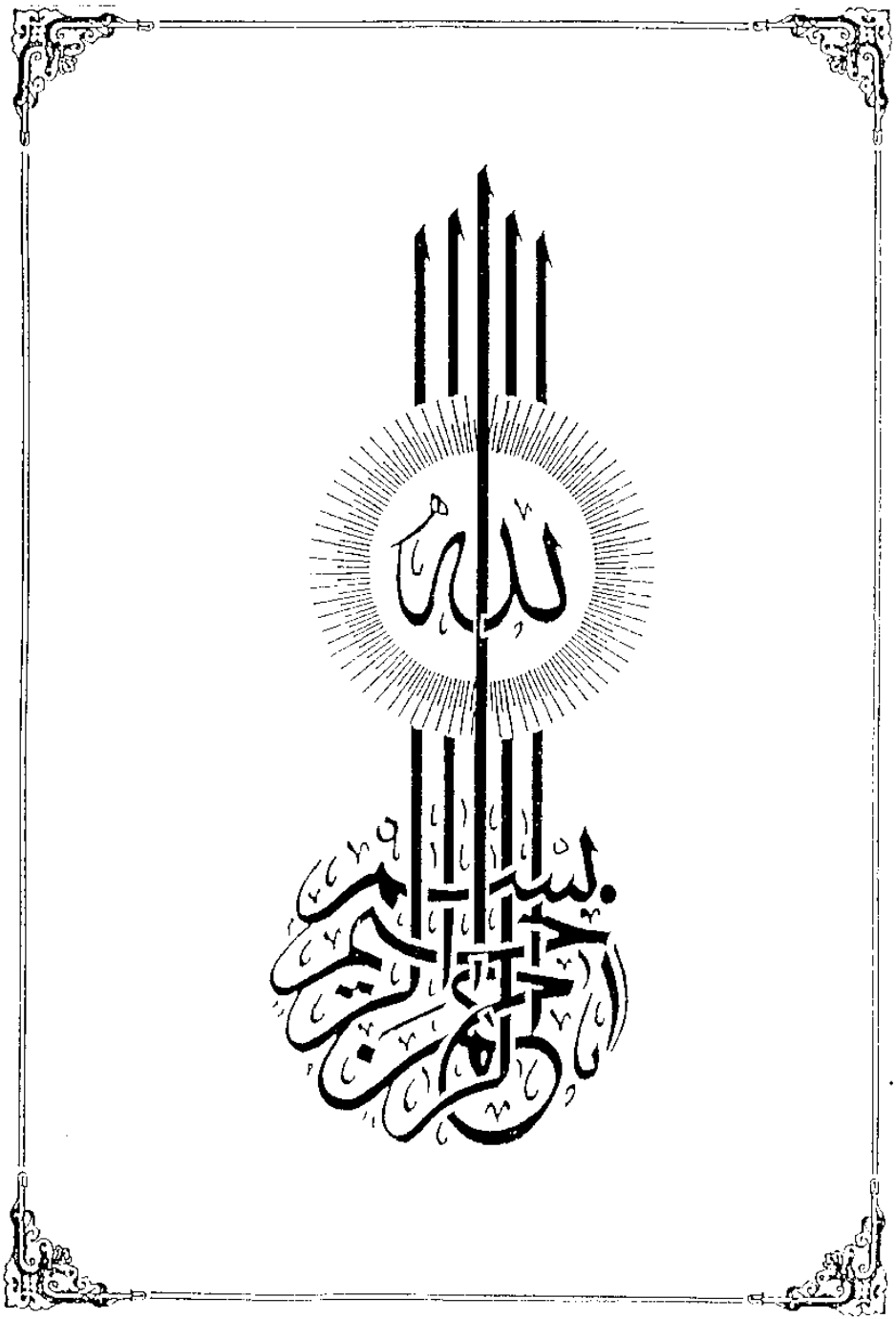
I would like to express my utmost gratitude to Prof. Dr. MOURAD A. SHERIF, Professor of Pathology, for his kind help and valuable advice.

I am particularly indebted to Prof. Dr. M.B. SAMMOUR, Professor of Obstetrics and Gynaecoloy, for suggesting the idea of this study, his sincere help, and expert guidance.

To Prof. Dr. IGLAL ABDEL RAZEK, Professor of Pathology, I am deeply grateful for her kind supervision, and continuous encouragement.

I wish also to express my profound gratitude to Dr. NADIA BAYOUMI, Assistant Professor of Pathology, for her supervision, and follow up of the whole work. She generously helped me in every step of this work.

I also record my thanks to the Staff of the Cyto-diagnostic Unit, for their co-operation.



C O N T E N T S

INTRODUCTION
&
AIM OF WORK

INTRODUCTION

Diagnostic cytology is a rapidly growing field the scope of which has greatly expanded in recent years. More and more pathologists and clinicians have come to recognize the potential of this diagnostic procedure, and to discover that it could replace many surgical biopsies and exploratory operations.

In a continuous effort to reduce the mortality rate from carcinoma of the ovary, research is directed towards its early detection. According to Disala and Creasman (1984), approximatly 23% of gynaecologic cancer are of ovarian origin. Popkin (1979) found that ovarian cancer accounts for 47% of gynaecologic cancer mortality. At the time of diagnosis, more than 60% of cases have extra-genital metastases, and 40% are nearly stages III and IV.

In fact, the detection of ovarian cancer in its early stages is a major diagnostic problem. The reasons for this, as explained by Schwinn et al (1984), are as follows:

(1) The ovary is not accessible for routine examination,

(2) Symptoms develop late in the course of the disease, and the patient may ignore them for some time before seeing a physician,

REVIEW OF THE LITERATURE

CHAPTER I : Pathology of ovarian tumours.

CHAPTER II : * Cytology of the normal peritoneal fluid.

Morphological identification of peritoneal fluid cells.

Origin of peritoneal fluid cells.

* Collection of peritoneal fluid.

Culdocentesis

* Techniques of cytologic study of the peritoneal fluid.

* Peritoneal fluid cytology and benign gynaecological tumours.

* Peritoneal fluid cytology and carcinoma of the ovary.

* Interpretation of the specimens.

Special consideration of false positive and false negative results.

CHAPTER III: Malignant Effusions.

* Introduction.

* Pathogenesis of ascites in peritoneal carcinomatosis.

* Cell typing of malignant cells.

* Cytologic examination of ascitic fluid in case of ovarian tumours.
* Accuracy of cancer cell detection by cytologic methods.

CLASSIFICATION OF OVARIAN TUMOURS

Fox and Buckley (1982) mentioned that the ovary gives rise to a greater range and variety of neoplasms, than does any other organ, and this oncological profusion may prove confusing unless ovarian tumours are considered in the setting of a logical and systematic classification.

The WHO classification of ovarian tumours has provided a framework, which since its introduction in 1973, has supplanted all preceding attempts to impose order on this host of neoplastic entities. It defined each individual tumour type, solely, in histological terms, no account being taken of gross characteristics or functional activity. The various separate tumours are then grouped together on the basis of their known, or presumed, common histogenesis (Serov, Scully, and Sobin 1973).

I. COMMON EPITHELIAL TUMOURS:

A. Serous Tumours:

1. Benign:

(a) Cystadenoma and papillary cystadenoma.

(b) Surface papilloma

(c) Adenofibroma and cystadenofibroma.

2. Of borderline malignancy: Carcinoma of low malignant potential

(a) Cystadenoma and papillary cystadenoma.

(b) Surface papilloma

(c) Adenofibroma and cystadenofibroma.

3. Malignant:

(a) Adenocarcinoma, papillary adenocarcinoma and papillary cystadenocarcinoma.

(b) Surface papillary carcinoma.

(c) Malignant adenofibroma and cystadenofibroma.

B. Mucinous Tumours:

1. Benign:

(a) Cystadenoma.

(b) Adenofibroma and cystadenofibroma.

2. Of borderline malignancy: carcinoma of low malignant potential

(a) Cystadenoma.

(b) Adenofibroma and cystadenofibroma.

3. Malignant:

(a) Adenocarcinoma and cystadenocarcinoma.

(b) Malignant adenofibroma and cystadenofibroma.

C. Endometrioid Tumours:

1. Benign:

(a) Adenoma and cystadenoma.

(b) Adenofibroma and cystadenofibroma.

2. Of borderline malignancy: carcinoma of low malignant potential

(a) Adenoma and cystadenoma

(b) adenofibroma and cystadenofibroma

3. Malignant:

(a) Carcinoma.

i) Adeno-carcinoma.

ii) Adeno-acanthoma.

iii) Malignant adenofibroma and cystadenoma.

(b) Endometrioid stromal sarcomas.

(c) Mesodermal (Mullerian) mixed tumours, homologous and heterologous.

D. Clear Cell (Mesonephroid) Tumours:

1. Benign: Adenofibroma.

2. Of borderline malignancy. carcinoma of low malignant potential

3. Malignant: Carcinoma and adenocarcinoma.

E. Brenner Tumours:

1. Benign.

2. Of borderline malignancy & proliferating

3. Malignant.

F. Mixed Epithelial Tumours:

1. Benign.

2. Of borderline malignancy.

3. Malignant.

G. Undifferentiated Carcinoma:

H. Unclassified Epithelial Tumours:

II. SEX-CORD STROMAL TUMOURS:

A. Granulosa-Stromal Cell Tumours:

1. Granulosa cell tumour.

2. Tumours in thecoma-fibroma group.

(a) Thecoma

(b) Fibroma

(c) Unclassified

B. Androblastomas, Sertoli-Leydig Cell Tumours:

1. Well-differentiated:

(a) Tubular androblastoma; Sertoli cell tumour.

(b) Tubular androblastoma with lipid storage; Sertoli cell tumour with lipid storage.

(c) Sertoli-Leydig cell tumour.

(d) Leydig cell tumour; Hilus cell tumour.

2. Of intermediate differentiation.

3. Poorly differentiated (sarcomatoid).

4. With heterologous elements.

C. Gynandroblastoma.

D. Unclassified.

III. LIPID (LIPOID) CELL TUMOURS.

IV. GERM CELL TUMOURS:

(a) Dysgerminoma.

(b) Endodermal sinus tumours.

(c) Embryonal carcinoma.

(d) Polyembryoma.

(e) Choriocarcinoma.

(f) Teratomas:

1. Immature

2. Mature:

a) Solid

b) Cystic

(i) Dermoid cyst (mature cystic teratoma).

(ii) Dermoid cyst (with malignant transformation).

3. Monodermal and highly specialized:

a) Struma ovarii.

b) Carcinoid

c) Struma ovarii and carcinoid

d) Others.

V. GONADOBLASTOMA:

(a) Pure

(b) Mixed with dysgerminoma and other forms of germ cell tumours.

VI. SOFT TISSUE TUMOURS NOT SPECIFIC TO OVARY.

VII. UNCLASSIFIED

VIII. SECONDARY TUMOURS

Tumour Like Conditions