DEDICATION

To my parents soul_

Acknowledgment

I would like to thank every body contribute at the success of this work particular.

I am deeply thank my supervisor **Dr. Husam AlDein Omer** for his guidance, and for his valuable assistance ,and achieve optimumout come for this research .

Also my great thank to Dr Humodi .A. Saeed, head department of Medical Laboratory Science, and all Teaching staff.

Further I thank all laboratory staff in Hospital(Khartoum hospital, Ebn Seina hospital, AlShurta hospital, and Soba hospital) that assist me in sample collection.

الخلاصة

أجريت هذه الدراسة في ولاية الخرطوم (في الفترة من مارس حتى يونيو 2005) تهدف لدراسة النمط الخلوى في السائل البروتوني ،باستخدام ثلاثة صبغ خلوية (بابنيكولا-هارس هيماتوكسلين ومايقروند _جيمسا).

ثلاثين عينة أخذت من المرضى من مختلف المستشفيات بولاية الخرطوم، حضرت العينات وفحصت بالمايكروسكوب، وجد أن الليمفوسايت موجودة في 27 (90%) عينة ، النيتروفيل في 7 (23.7%) ، الماكروفيج في 13 (43.3%) ، خلايا الميسوثيليل في 18 (60%) ،الإيسينوفيل في عينة واحدة (3.3%) والخلايا السرطانية وجدت في 26.7%) عينات .

صبغة البابنيكولا ظهرت أفضل صبغة (86.5%) حيث أنه 21 مسحة عينة كانت ممتازة،4 جيد جداً،2 جيد و 3 كانت مقبوله . صبغة الهارس هيماتوكسلين أتت في المرتبة التالية (85.5%) حيث أنه 21 مسحة ممتازة ، 2 جيد جداً، 4 جيد و 3 مقبولة . في المرتبة الأخيرة أتت صبغة المايقروند. جيمسا (80.5%) حيث أنه 13عينة قيمت ممتازة، 8 عينات جيد جداً ، 6 عينات جيد و 3عينات مقبولة .

Abstract

This Study was carried out in Khartoum State during a period from (March to June 2005). It aimed to study cellular patterns in ascitic fluid using three cytological stains (Papanicolaou, Harris haematoxylin and eosin, and may Grun wald–Giemsa Stain).

Thirty sampls were taken from patients who attended to different hospitals in Khartoum State, the sample were processed and examined microscopically. Lymphocytes were presented in 27(90%) samples, neutrophils in 7(23%), macrophage in 13(43.3%), mesothelial cell found in 18(60%), plasma cell in 4(13.3%) cases. Eosinophils in one case (3.3%).and malignant cells in 8 samples (26.7%).

The papanicolaou showed best staining (86.5%), 21 samples were evaluate as excellent, 4 very good, 2 good and 3 as acceptable. Harris haematoxylin and eosin came next (85.5%), excellent, stain showed in 21 samples, very goods 2 samples, good 4 sample and 3 samples were acceptable. At last came, May Gun wald-Giemsa stain (80.5%).13 were evaluated as excellent, 8very good.6 good and 3

.as acceptable

Contents

Dedication	Ī
Acknowledgment	
خُلاصة البحث	
Abstract	
Contents	
List of tables	
List of figures	
List of plates	
Chapter One	
Introduction and Literature review	
1-1 Introduction	1
1-2 structure and physiology of peritoneum	
1-3 Causes of ascites	
1-3-1 Causes of Transudate ascites	
1-3-2 Causes of exudates ascites	
1-3-2-1 Exudate of peritonitis	
1-3-2-1-1-a Acute peritonitis	
1-3-2-1-b Chronic peritonitis	
1-3-2-2 Exudate of tumors	
1-4 Cells population in peritoneal effusions	
1-4-1-1 Mesothelial Cells	
1-4-1-2 Marcrophages	14
1-4-1-3 Other leukocyte	16
1-4-1-4 Other benign cells encountered in effusion	17
1-4-2 Effusion with malignant cells	18
1-4-2-1 The primary peritoneal Mesotheliona	
1-4-2-2 Cell population of Mesothelioma	
1-4-2-2-1 Adenocaricinomas of gastro intestinal tract	21
1-4-2-2 Cytological presentation of malignant disorder of	
lymphoid and Hematogenous origin	
1-4-3-2-a Large- Cell lymphomas	23

1-4-2-2b Small- Cell lymphoms	24
1-4-2-3 Carcinoma of the breast	25
1-4-2-4 Malignant tumors of the ovary	26
1-4-3-2-4-a Serous type of ovarian Carcinoma	26
1-4-2-4-b Mucinous ovarian tumors	26
1-4-2-2-4-C Mixed types of ovarian Carcinoms	27
1-4-2-4-d Endometroid Carcinoma of the ovary	28
1-4-2-4-e Ovarian Mesothelioma	28
1-4-3-2-4-f Other ovarian tumors	29
1-5 Cytological stain	
1-5-1 Papanicolaou stain	30
1-5-2 Harrishaematoxylin and eosin	
1-5-3 Romanowsky stain	30
Chapter Tow	32
Objectives	32
Chapter Three	
Materials and Methods	33
3-1 Materials	33
3-2 Methodogy	33
3-2-1 Study design	33
3-2-2 Study population	33
3-2-3 Sample collection	33
3-2-4 Sample processing	34
3-2-5 Statistical analysis	35
Chapter Four	36
Results and Discussion	
Chapter Five Conclusions and Recommendations	59
References	60
Appendix:	
Appendix :1	66
Appendix: 2	67

List of T ables

Tables	contents	age
Table (1): ∃	The Description of Gender by Age	42
Table (2): ⊺	TheTypes of Cells Pattern by Age	43
Table (3): ⊺	The Classification of Benign and Malignant by age	44
Table (4): ⊺	The Classification of Transudate and Exudates by age	e45
Table (5): ⊺	The Description of Quality of the Three stains with	
Percentage	?S	46

List of Figures

Figure (1-a): The description of gender by age47
Figure(1-b): The description of gender for cases
Figure(2): Types of cells pattern49
Figure(3-a): Classification of cases into benign and
malignant by age 50
Figure (3-b) :Classification of cases into benign and malignant
by age51
Figure (4): The classification of transudate and exudates
by age52
Figure (5): The description of quality for the three stains
(with percestage)53

List of Plates

Picture	content		age
Picture(1):	Excellent staining	with harris haematoxy	lin and eosin
shows malig	nant cells		45
Picture(2):	Excellent staining	with papanicolaou sta	in shows
malignant ce	ell from the same	sample mentioned in (1)45
Picture (3):	Very good staining	ng with may Gruawald	.Giemsa staining
shows malig	nant cells from th	e same sample mentic	oned in (1&2)56
Picture (4):	Very good staining	ng with may Gruawald	.Giemsa staining
shows malig	nant cells		56
Picture (5):	Very good stainin	g with Papanicolaou s	hows malignant
cels with gla	ndular structure fr	rom the same sample i	mentioned
in (4)			57
Figure (6):	Excellent stain wit	h papanicolaou stain s	hows mesothelial
cells and lyn	nphocytes		57

Picture(7): Excellent staining with may Grunwals-Giemsa shows
mesothelial cells, lymphocytes and macrophages58
Picture(8): Excellent staining with Harris haematoxylin and Eosin
shows inflammatory cells (macrophages, neutrophils and
lymphocytes)58
Picture (9): Excellent staining with papanicolaou staining shows
neutrophils, lymphocytes and macrophages59
Picture (10): Excellent staining with may Grun wald –Giemsa staining
shows malignant cells with glandular structure59