

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال الله تعالى

تَرْفَعُ دَرَجَاتٍ مَن نَّشَاءُ وَفَوْقَ كُلِّ ذِي
عِلْمٍ عَٰلِيمٌ

صدق الله العظيم

سورة يوسف الآية 76

Dedication

**To my father,
To my mother,
To my brothers, sisters
and colleagues...
I dedicate this study.**

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All great thanks are firstly to Allah.

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Abstract

This is a hospital based descriptive retrospective study. It was conducted at Souba Teaching Hospital, Omdurman Military Hospital and Sudan University of Science and Technology (Khartoum state), during period from April to August 2013, aimed to detect P53 and Bcl-2 expression in colorectal tumors.

A total number of 50 tissue paraffin blocks previously diagnosed as colorectal tumors were selected. 40 (80%) samples were colorectal adenocarcinoma and 10 (20%) samples were colorectal adenomatous polyps. Their age ranged from 5 to 78 years old with mean age of 49 years, 30 (60%) were males and 20 (40%) were females. Tissue section were cut and stained using haematoxylin and eosin method to confirm histopathological diagnosis and new indirect method for histochemical detection of p53 and Bcl-2. The obtained data was analyzed using SPSS program version 11.5. Frequencies mean and chi square test value was calculated.

Colorectal adenocarcinoma showed 17 (42.5%) samples were well differentiated adenocarcinoma, 11 (27.5%) samples were moderately differentiated adenocarcinoma, while 6 (15%) samples poorly differentiated adenocarcinoma, and the rest 6 (15%) samples were not graded adenocarcinoma.

Positive p53 expression was detected in 23 (46%) samples of colorectal adenocarcinoma with on expression in adenomatous polyps. 17 (32%) and 10 (20%) samples of colorectal adenocarcinoma and adenomatous polyps, respectively showed negative nuclear p53 expression.

Concerning bcl-2, positive expression was detected in 29 (58%) samples of colorectal adenocarcinoma and only one (2%) sample of adenomatous polyps, while 11 (22%) and 9 (18%) samples of colorectal

adenocarcinoma and adenomatous polyps, respectively revealed negative bcl-2 expression.

This study found that there is significant relation between age group and colorectal adenocarcinoma, also showed significant relation between colorectal adenocarcinoma and p53 expression, as well bcl-2 expression and colorectal adenocarcinoma, while there is no significant relation between p53 and bcl-2 expressions in colorectal adenocarcinoma.

This study concluded that p53 and bcl-2 expression associated with malignant colorectal tissue compared to benign tissue, as well as no significant relation between p53 and bcl-2 expression and colorectal adenocarcinoma grades.

مستشفى في ام درمان الطبي العسكري و جامعة السودان للعلوم والتكنولوجيا (ولاية الخرطوم) في الفترة من ابريل إلى أغسطس 2013، هدفت الدراسة لاستكشاف واسمات في أورام القولون والمستقيم bcl-2 و p53 الأورام.

تم جمع 50 قالب مدعم بالشمع لمرضي مشخصين مسبقا بأورام القولون والمستقيم، أظهر التشخيص النسيجي إن 40 (80%) منهم مصاب بسرطان القولون والمستقيم الغددي و 10 (20%) منهم مصاب بالأورام الحميدة للقولون والمستقيم من النوع الغددي و تراوحت أعمارهم ما بين 5 إلى 78 سنة، بمتوسط أعمار 49 سنة، 30 (60%) منهم رجال و 20 (40%) نساء.

قطعت المقاطع النسيجية و صبغت بطريقتين، صبغ احدي المقاطع بواسطة صبغة الهيماتوكسلين و والايسين لتأكيد التشخيص النسيجي، و الآخر عن طريق كيمياء الأنسجة المناعية باستخدام طريقة التقنية الجديدة غير المباشرة لتحديد الواسمات، وتم تحليل النتائج بواسطة استخدام برامج الحزمة الاحصائية للعلوم الاجتماعية النسخة 11.5.

وجدت الدراسة 17 (42.5%) عينة كانت من سرطان القولون والمستقيم جيد التباين و 11 (27.5%) عينة كانت من سرطان القولون والمستقيم متوسط التباين و 6 (15%) عينات كانت من سرطان القولون والمستقيم سيئي التباين بينما المتبقي 6 (15%) عينات كانت غير مصنفة.

في 23 (42.5%) عينة من سرطان القولون p53 تم اكتشاف نتائج ايجابية للواسمة والمستقيم الغددي بينما لم يتم اكتشافا في عينات الأورام الحميدة للقولون والمستقيم الغددي وأيضا تم اكتشاف نتائج سلبية في 17 (32%) و 10 (20%) عينات من سرطان القولون والمستقيم الغددي و الأورام الحميدة للقولون والمستقيم الغددي علي التوالي.

تم اكتشاف نتائج ايجابية في 29 (58%) عينة من سرطان bcl-2 فيما يتعلق بالواسمة القولون والمستقيم الغددي وفي عينة واحدة (2%) من الأورام الحميدة للقولون والمستقيم الغددي بينما أظهرت نتائج سلبية في 11 (22%) عينة من سرطان القولون والمستقيم الغددي و 9 (18%) عينات من الأورام الحميدة للقولون والمستقيم الغددي.

أظهرت الدراسة وجود علاقة ذات دلالة بين الأعمار أكثر من 50 سنة و سرطان القولون والمستقيم الغدي ، كما أظهرت ايضاً وجود علاقة ذات دلالة بين من سرطان القولون كما أظهرت وجود علاقة ذات دلالة بين ، p53 والمستقيم الغدي وظهور الواسمة و سرطان القولون و المستقيم الغدي بينما لا توجد علاقة ذات bcl-2 ظهور الواسمة و مستوي تصنيف سرطان القولون و المستقيم p53 و bcl-2 دلالة بين ظهور الواسمات الغدي.

يكون أكثر في الأنسجة p53 و bcl-2 خلصت هذه الدراسة إلي أن زيادة ظهور الواسمات السرطانية للقولون و المستقيم مقارنة بالأورام الحميدة للقولون والمستقيم ، كما ومستوي bcl-2 و p53 خلصت إلي عدم وجود علاقة ذات دلالة بين ظهور الواسمات .تصنيف سرطان القولون و المستقيم الغدي.

List of Abbreviations

Bcl-2: B-cell lymphoma-2

TP53: Tumor Protein-53

P53: Protein-53

DCC: Deleted in Colorectal Carcinoma

APC: Adenomatous Polyposis Coli

K-ras: Kirsten Rat Sarcoma viral oncogene

CRC: Colorectal Cancer

GIT: Gastrointestinal Tract

NSAIDs: Non-Steroidal Anti-Inflammatory Drugs

FOBT: Fecal Occult Blood Test

DNA: Deoxyribonucleic Acid

sDNA: Stool Deoxyribonucleic Acid

G1: Gap1 phase

S-phase: Synthesis Phase

DAB: 3,3 Diamino Benidine tetra hydrochloride

List of Contents

Page	Subject	No
I	اللمعة	
II	Dedication	
III	Acknowledgement	
IV	Abstract (English)	
VI	Abstract (Arabic)	
VIII	List of abbreviations	
IX	List of contents	
XI	List of tables	
XII	List of photographs	
Chapter one		
Introduction		
1	Introduction	1.1
3	Rational	
4	Objectives	1.2
4	General objective	1.2.1
4	Specific objectives	1.2.2
Chapter two		
Literature review		
5	Anatomy and histology of the large intestine	2.1
5	The cecum	2.1.1
5	The colon	2.1.2
5	The rectum	2.1.3
6	Tumors of colon and rectum	2.2
6	Benign tumors of colon and rectum	2. 2.1
6	Hyperplastic polyps	2. 2.1.1
6	Adenomatous polyps	2.2.1.2
6	Serrated polyps	2. 2.1.3
6	Malignant tumors of colon and rectum	2.2.2
7	Carcinoma in situ or high grade dysplasia	2. 2.2.1
7	Invasive colon cancer	2. 2.2.2
7	Risk factors	2.3
7	Heredity and family history	2.3.1
7	Personal medical history	2.3.2
7	Physical inactivity	2.3.3
7	Overweight and obesity	2.3.4
8	Diet	2.3.5
8	Smoking	2.3.6

8	Alcohol	2.3.7
8	Medications and dietary supplements	2.3.8
8	Age	2.3.9
9	Diagnosis colorectal tumors	2.4
9	Flexible sigmoidoscopy	2.4.1
9	Colonoscopy	2.4.2
9	Barium enema with air contrast	2.4.3
9	Primarily laboratory investigation	2.4.4
9	Fecal occult blood test (FOBT)	2.4.4.1
9	Stool DNA (sDNA) test	2.4.4.2
10	Histopathological biopsy	2.4.5
10	P53	2.5
11	Bcl-2	2.6
12	Treatment colorectal tumors	2.7
12	Adjuvant chemotherapy	2.7.1
Chapter three		
Material and Methods		
13	Materials	3.1
13	Methods	3.2
13	Study design	3.2.1
13	Study samples	3.2.2
13	Haematoxylin and eosin stain for histopathology diagnosis	3.2.3
14	Immunohistochemical staining	3.2.4
14	Result interpretation	3.2.5
14	Ethical consideration	3.2.6
14	Statistical analysis	3.2.7
Chapter four		
Results		
15	Results	4
Chapter five		
Discussion, Conclusion and recommendations		
33	Discussion	5.1
36	Conclusion	5.2
36	Recommendations	5.3
37	References	
45	Appendices	

List of Tables

Page	Title	Table
17	Distribution of histopathological diagnosis among study samples	4.1
18	Frequency of sex among samples	4.2
19	Distribution of age group among study samples	4.3
20	Frequency of cancer grade among adenocarcinoma samples	4.4
21	Relation between immunohistochemical expression of P53 and histopathological diagnosis	4.5
22	Relation between immunohistochemical expression of Bcl-2 and histopathological diagnosis	4.6
23	Relation between age group and histopathological diagnosis	4.7
24	Relation between immunohistochemical expression of P53 and histopathological grade	4.8
25	Relation between immunohistochemical expressions of Bcl-2 and cancer grade	4.9
26	Correlation between immunohistochemical expression of P53 and Bcl-2	4.10

List of Photographs

Photo	Title	Page
4-1	Well differentiated colorectal adenocarcinoma show positive Bcl-2 expression (X100)	27
4-2	Well differentiated colorectal adenocarcinoma show positive P53 expression (X100)	28
4-3	Moderately differentiated colorectal adenocarcinoma show positive Bcl-2 expression (X100)	29
4-4	Moderately differentiated colorectal adenocarcinoma show positive P53 expression (X100)	30
4-5	Invasive colorectal adenocarcinoma show positive P53 expression (X100)	31
4-6	Poorly differentiated colorectal adenocarcinoma show positive Bcl-2 expression (X100)	32