

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال تعالى :

﴿وَفَوْقَ كُلِّ ذِي عِلْمٍ عِلْمٌ﴾

صدق الله العظيم

الآية { 76 } من سورة يوسف

Dedication

I dedicate this work to my

Parents ...

Teachers ...

sisters and brothers ...

Colleagues ...

Dear and Best Friends ...

And to everyone who helped me to learn new thing .

Acknowledgments

Firstly I want to give my greatest thanks to Allah for his gifts which never ends.

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Abstract

P. falciparum malaria is known to interfere with biology and the specific immunity against EBV and can induce virus reactivation.

This study was carried out to detect Epstein–Barr virus DNA in plasma specimens of children with and without *Plasmodium falciparum* malaria who attended Al-jabel Military Medical Hospital and Jabel Aulia Hospital during the period September to December 2015.

A total of 80 blood specimens were collected and DNA was extracted from plasma of the patients. Epstein-Barr virus DNA was detected using conventional Polymerase Chain Reaction.

The specimens included 50 plasma of children with *P. falciparum* malaria infection. Their mean age 7 ± 4 years among which 31(62%) were males and 19 (38%) were females. Samples included also 30 plasma specimens of children with age matched the malaria patients; mean age 7.6 ± 4 years among which 16 were males and 14 were females. Mean of hemoglobin (Hb) of children with *P. falciparum* malaria infection was 9.8 ± 2.4 g/dl and for the children without *P. falciparum* malaria infection was 10.4 ± 2 g/dl.

EBV DNA was detected in 2 specimens of the control group (without *P. falciparum* malaria, 6.7%), while EBV DNA was not detected among the children with *P. falciparum* malaria infection (0.0%). The two EBV DNA positive individuals were in the younger age group (1-5 years of age). Analysis showed no relation between EBV infection and patient's age and gender. In addition, there was also no relation between EBV infection, parasitemia, and Hb levels (p. values ≥ 0.2).

These results may indicate absence or low EBV infection among *P. falciparum* malaria infected children.

ملخص الأطروحة

أجريت هذه الدراسة للكشف عن الحمض النووي لفيروس ابشتاين- بار في عينات بلازما لدى أطفال مصابين و غير مصابين بالمalaria بمستشفى السلاح الطبي بجبل أولياء ومستشفى جبل أولياء خلال الفترة من سبتمبر إلى ديسمبر 2015.

جمعت 80 عينة دم من المرضى وتم استخلاص الحمض النووي من البلازما للكشف عن فيروس ابشتاين- بار بواسطة اختبار تفاعل البلمرة التسلسلي.

تضمنت العينات 50 عينة بلازما من اطفال مصابين ببلازموديوم فالسيبارم ملاريا. متوسط اعمارهم 7 ± 4 سنوات, 31 (62%) ذكور و 19 (38%) اناث و 30 عينة بلازما من اطفال مماثلين لهم في العمر غير مصابين ببلازموديوم فالسيبارم ملاريا , متوسط اعمارهم 7.6 ± 4 سنوات, 16 (53.3%) ذكور و 14 (46.7%) اناث. متوسط خضاب الدم للاطفال المصابين ببلازموديوم فالسيبارم ملاريا كان 9.8 ± 2.4 جم/ديسل, اما في الاطفال غير المصابين ببلازموديوم فالسيبارم ملاريا كان متوسط خضاب الدم 10.4 ± 2 جم/ديسل.

تم الكشف على الحمض النووي لفيروس ابشتاين- بار في عينتين من الاطفال غير المصابين ببلازموديوم فالسيبارم ملاريا (6.7%). بينما لم يتم الكشف عن الحمض النووي لفيروس ابشتاين بار لدى الاطفال المصابين ببلازموديوم فالسيبارم ملاريا (0,0%). عينا المرضى الايجابيتان وجدت في الفئة العمرية الأصغر سنا (1-5 سنوات من العمر).

اظهر التحليل انه لا توجد علاقة بين الإصابة بفيروس ابشتاين- بار , عمر المريض و النوع. إضافة إلى ذلك, لم يكن هناك أيضاً اختلاف ذات دلالة إحصائية بين الإصابة بفيروس ابشتاين- بار, كثافة الطفيل ومعدل خضاب الدم.

هذه النتائج قد تشير إلى غياب أو انخفاض الإصابة بفيروس ابشتاين- بار وسط الاطفال المصابين ببلازموديوم فالسيبارم ملاريا.

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List of Abbreviations

Abbreviations	Meaning
AIDS	Acquired Immunodeficiency Syndrome
BL	Burkitt's Lymphoma
CMI	Cell mediated immunity
CIDR1α	Cysteine rich interdomain region 1 α
CTL	Cytotoxic T lymphocyte
DNA	Deoxyribonucleic acid
eBL	endemic Burkitt's Lymphoma
ELISA	Enzyme Linked Immunosorbent Assay
EBNA	Epstein-Barr nuclear antigen
EBV	Epstein-Barr Virus
EBER	Epstein-Barr Virus encoded mRNA
GC	Gastric Carcinoma
Hb	Hemoglobin
HD	Hodgkin Disease
IM	Infectious Mononucleosis
IARC	International Agency for Research on Cancer
LMP	Latent membrane protein
NPC	Nasopharyngeal Carcinoma
NHL	Non-Hodgkin lymphomas
OHL	Oral Hairy Leukoplakia
PfEMP1	<i>Plasmodium falciparum</i> erythrocyte membrane protein1

<i>P.falciparum</i>	<i>Plasodium falciparum</i>
<i>P. vivax</i>	<i>Plasodium vivax</i>
PCR	Polymerase Chain Reaction
PTLD	post transplantation lymphoproliferative disease
RA	Rheumatoid arthritis
SPSS	Statistical Package of Social Science program
SLE	Systemic Lupus Erythromatosus
TBE buffer	Tris Boric acid EDTA buffer
VCA	Viral Capsid Antigen
WHO	World Health Organization
XLPS	X-linked lymphoproliferative syndrome