

VOLUME 39, NUMBER 7
July 2022

ISSN 0189 - 160X

WAJMJ

WEST AFRICAN JOURNAL OF MEDICINE

ORIGINALITY AND EXCELLENCE IN MEDICINE AND SURGERY



OFFICIAL PUBLICATION OF
THE WEST AFRICAN COLLEGE OF PHYSICIANS *AND*
WEST AFRICAN COLLEGE OF SURGEONS



www.wajmed.org



TABLE OF CONTENTS

GENERAL INFORMATION	1C
INFORMATION FOR AUTHORS	1F
EDITORIAL NOTES	653
ORIGINAL ARTICLES	
Evaluation of Obstetricians' Opinion of Thrombocytopenia in Pregnancy: A Cross-Sectional Study	657
C. C. Efobi, H. C. Okoye, K. I. Korubo, I. U. Ezebialu, O. C. John	
A Retrospective Study on Changing Trends of Acquired Immunodeficiency Syndrome related Kaposi's Sarcoma in North-Western Nigeria	663
M. A. Adeiza, U. Abdullahi	
Latent Tuberculosis among Human Immunodeficiency Virus (HIV) Positive Patients: Prevalence and Correlates	670
B. D. Ajayi, J. O. Ogunkoya, A. Onunu, B. Okwara, O. Ehondo, F. O. Ajayi	
Perception and Learning Satisfaction of Resident Doctors Amid COVID-19 Pandemic: Adaptation Experience at a Virtual Educational Course in Internal Medicine	678
W. O. Balogun, A. A. Afolabi, A. Fadipe	
Parent-Youth Sexual Discussion and its Association with Sexual Activity among Undergraduates in a Nigerian University	685
O. A. Akinbajo, O. J. Daniel, A. O. Adekoya, O. O. Abolurin, A. E. Akinbajo, A. O. Adekoya	
Effect of Obesity on Resistin Concentrations in Normal, Pre-Obese and Obese Apparently Healthy Nigerian-Africans	691
O. U. Onyemelukwe, D. Ogoina, G. C. Onyemelukwe	
Impact of SARS-CoV-2 Pandemic on Antiretroviral Access at a Large Treatment Centre in Lagos, Nigeria	703
S. T. Adaba, T. E. Musari-Martins, A. O. Salako, I. I. Olojo, O. O. Odubela, S. O. Ekama, P. N. Ezemelue, I. E. Idigbe, T. A. Gbaja-Biamila, A. Z. Owolabi, B. A. Opaneye, E. C. Herbertson, A. N. David, O. C. Ezechi, B. L. Salako	
The Reliability and Validity of the 5-Item Who Well-Being Index (WHO-5) amongst Doctors and Nurses in Nigeria	708
O. J. Seb-Akahomen, E. O. Okogbenin, O. M. Obagaye, P. O. Erohubie, B. E. Aweh	
Evaluation of the Prevalence and Anatomic Types of Congenital Heart Diseases: An Echocardiographic Study in a Tertiary Hospital in Nigeria	714
W. E. Sadoh, E. Eyo-Ita, S. O. Okugbo	
Serum Immunoglobulin E and Vitamin D Levels in Asthma Patients in Enugu, Nigeria: Association with Asthma Control	721
M. D. Ibegbu, C. E. Ebulue, J. N. Eze, C. A. Ndubuisi, O. C. Orji, J. E. Ikekpeazu, C. C. Onyedum	
Sleep Quality in a Nigerian Community: Prevalence of Poor Sleep Quality, Risk Factors and Health-Related Quality of Life	729
A. C. Jemilohun, O. A. Fasesan, T. O. Ajiro, K. O. Akande, C. J. Elikwu, O. O. Adeleye	
Maternal and Child Healthcare Delivery in Secondary Healthcare Facilities in Oyo State, Nigeria: Working Towards Sustainable Development Goal 3	737
T. O. Salam, O. O. Akinyemi	
Knowledge and Attitude of Fathers towards Childhood Vaccination in Ogun State, Nigeria: A Comparative Study	747
K. J. Sodeinde, O. E. Olorunfemi, A. O. Adekoya, O. O. Abolurin, B. G. Imhonopi, J. O. Bamidele, O. A. Abiodun	
Community Advocacy and Capacity Building of Community Health Workers on Rheumatic Heart Disease in Osun State, Nigeria	756
J.A. Okeniyi, M.Y. Ijaduola, O.T. Elugbaju, O.S. Fakoyejo, B. Adeyefa, O.T. Bamigboye-Taiwo, O. Afolabi, K. Akinroye, A. Osibogun	
Association between Abnormal Serum Lipid Levels in Early Pregnancy and Development of Preeclampsia	761
E. L. Ameh, H. I. Abdullahi, R. A. Offiong, S. M. Dalili, E. T. Agida, A. Y. Isah	
CASE REPORT	
Acute Kidney Injury after First Dose of AstraZeneca COVID-19 Vaccine Managed in a Nigerian Hospital	769
A. E. Onukak, E. E. Akpan, A. I. A. Udo, M. K. Kalu	
INDEX TO VOLUME 39, NO. 7, 2022	
Author Index	772
Subject Index	773



Serum Immunoglobulin E and Vitamin D Levels in Asthma Patients in Enugu, Nigeria: Association with Asthma Control

Niveaux D'immunoglobuline E Et De Vitamine D Sériques chez les Patients Asthmatiques d'Enugu, au Nigeria : Association Avec le Contrôle De L'asthme

¹M. D. Ibegbu, ¹C. E. Ebulue, ^{2*}J. N. Eze, ¹C. A. Ndubuisi, ³O. C. Orji, ¹J. E. Ikekpeazu, ⁴C. C. Onyedum

ABSTRACT

BACKGROUND: Asthma symptoms are often mediated by changes in immune responses to allergens measured by the levels of immunoglobulin E (IgE) and non-protein regulators such as 25-hydroxycholecalciferol (25 (OH) vitamin D3). The relationship between serum levels of IgE, 25 (OH) Vitamin D3, and asthma control in asthma patients remains unclear.

OBJECTIVE: To measure the serum IgE and 25 (OH) vitamin D3 levels in asthma patients and determine their relationship with patient's asthma control.

METHODS: This was a cross-sectional study of children and adults with asthma aged 5 to 60 years old; and their controls seen in a tertiary hospital in Enugu, south eastern Nigeria from October 2018 to January 2019. Serum levels of IgE, and 25 (OH) vitamin D3 were determined by sandwich enzyme-linked immunosorbent assay (ELISA); and compared between groups using the Student's *t*-tests. Association between IgE, 25 (OH) vitamin D3 levels, and asthma control were determined using the Chi-square.

RESULTS: Sixty-five (65) asthma patients and thirty-three (36) non-asthma controls were studied. Mean serum level of IgE (411.32 ± 220.18 IU/ml) was significantly raised in asthma patients compared to controls (163.51 ± 186.36 IU/ml); *p*=0.001. There was no significant difference in mean 25 (OH) vitamin D3 levels in asthma (68.55 ± 25.91 ng/ml) compared to controls (77.25 ± 34.01 ng/ml); *p*=0.153. No significant association was found between patient's asthma control status, and serum IgE and 25 (OH) vitamin D3 levels.

CONCLUSION: Asthma control status was not associated with Immunoglobulin E and 25 (OH) vitamin D3 levels in those studied. More robust study is required to evaluate the relationship between asthma control, IgE and vitamin D levels. **WAJM 2022; 39(7): 721–728.**

Keywords: 25 hydroxyl vitamin D3, Immunoglobulin E, Asthma control, Children.

RÉSUMÉ

BACKGROUND: Les symptômes de l'asthme sont souvent médiés par des changements des réponses immunitaires aux allergènes, mesurées par les taux d'immunoglobuline E (IgE) et de régulateurs non protéiques tels que le 25- hydroxycholecalciférol (25 (OH) vitamine D3). La relation entre les niveaux sériques d'IgE, de 25 (OH) vitamine D3 et le contrôle de l'asthme chez les patients asthmatiques n'est pas claire.

OBJECTIF: Mesurer les taux sériques d'IgE et de 25 (OH) vitamine D3 chez les patients asthmatiques et déterminer leur relation avec le contrôle de l'asthme chez les patients.

MÉTHODES: Il s'agit d'une étude transversale d'enfants et d'adultes asthmatiques âgés de 5 à 60 ans; ainsi que de leurs témoins vus dans un hôpital tertiaire d'Enugu, dans le sud-est du Nigeria, d'octobre 2018 à janvier 2019. Les taux sériques d'IgE et de 25 (OH) vitamine D3 ont été déterminés par dosage immuno-enzymatique en sandwich (ELISA); et comparés entre les groupes à l'aide des tests *t* de Student. L'association entre les niveaux d'IgE, de 25 (OH) vitamine D3 et le contrôle de l'asthme a été déterminée à l'aide du chi carré.

RÉSULTATS: Soixante-cinq (65) patients asthmatiques et trente-trois (36) témoins non asthmatiques ont été étudiés. Le taux sérique moyen d'IgE (411,32 ± 220,18 UI/ml) était significativement plus élevé chez les patients asthmatiques que chez les témoins (163,51 ± 186,5 UI/ml); *p*=0,001. Il n'y avait pas de différence significative dans les taux moyens de 25 (OH) vitamine D3 chez les asthmatiques (68,55 ± 25,91 ng/ml) par rapport aux témoins (77,25 ± 34,01 ng/ml); *p*=0,153. Aucune association significative n'a été trouvée entre le statut de contrôle de l'asthme du patient et les taux sériques d'IgE et de 25 (OH) vitamine D3.

CONCLUSION: Le contrôle de l'asthme n'était pas associé aux taux d'immunoglobulines E et de 25 (OH) vitamine D3 chez les personnes étudiées. Une étude plus solide est nécessaire pour évaluer la relation entre le contrôle de l'asthme, les taux d'IgE et de vitamine D. **WAJM 2022; 39(7): 721–728.**

Mots clés: 25 hydroxyl vitamine D3, Immunoglobuline E, Contrôle de l'asthme, Enfants, contrôle, Enfants.

¹Department of Medical Biochemistry, Faculty of Basic Medical Sciences, College of Medicine, University of Nigeria, Enugu Campus, Nigeria. ²Department of Paediatrics, Faculty of Medical Sciences, College of Medicine, University of Nigeria, Enugu State, Nigeria. ³Department of Medical Laboratory Sciences, Faculty of Health Sciences, College of Medicine, University of Nigeria, Enugu Campus, Nigeria. ⁴Department of Medicine, Faculty of Medical Sciences, College of Medicine, University of Nigeria, Enugu State, Nigeria. *Correspondence: Dr. Joy N. Eze, Department of Paediatrics, Faculty of Medical Sciences, College of Medicine, University of Nigeria, Ituku Ozalla, Enugu; postal code: 400001 Phone Numbers: +2348035497646 E-mail: joy.eze@unn.edu.ng ORCID <https://orcid.org/0000-0002-1708-9182> Abbreviations: ACTs: Asthma Control Tests; ELISA: Enzyme Linked Immunosorbent Assay; GINA: Global Initiative for Asthma; IgE: Immunoglobulin E; Th: T-helper.