

VOLUME 40, NUMBER 5

ISSN 0189 - 160X

May 2023

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 – The Challenge of Proper Diagnosis and Treatment of Diseases in Low-Resource Settings	459
T. O. Olajubu, G. E. Erhabor	
– Initiatives and Strategies for Tackling Asthma in Low and Medium-Income (LMIC) Countries	460
G. E. Erhabor	
ORIGINAL ARTICLES	
Dermoscopic Features seen in Tinea Capitis, Tinea Corporis and Tinea Cruris	463
Z. I. Babba, M. Y. Shehu, B. A. Ukonu, P. U. Ibekwe	
Knowledge and Compliance with Malaria National Treatment Guidelines among Primary Health Care Workers in a Rural Area in Northern Nigeria	469
A. Oyefabi, M. Awaje, N. O. Usman, J. Sunday, S. Kure, S. Hammad	
Frequency and Pattern of Shoulder Pain Syndrome in a Nigerian Tertiary Hospital	476
G. J. Odunlami, H. B. Olaosebikan, O. O. Adelowo, G. E. Erhabor	
Prenatal Screening for Down Syndrome: How Acceptable is it among Pregnant Nigerian Women?	481
J. A. Akinmoladun, E. J. Enabudoso, O. O. Bello	
Prevalence of Mental Ill-Health among Visually Impaired Patients in a Tertiary Institution in Southwestern Nigeria	488
S. T. Adepoju, J. F. A. Owoeye, Y. Ologunsua, O. Abayomi	
HIV Knowledge and Screening Practices among In-School Adolescents in a Semi-Urban Community of Osun State, Southwest Nigeria	495
A. Idowu, Y. T. Olasinde, O. R. Akande, O. K. Israel, M. I. Akanbi, E. Ogum, O. V. Ajeleti, P. E. Christopher, O. V. Fajembimo, A. J. Owolabi	
Total Salivary Antioxidant and Serum Antioxidant Levels in Recurrent Aphthous Stomatitis: A Case Control Study	504
A. M. Oluwadaisi, F. J. Owotade, E. O. Oyetola, I. J. Olawuni, A. O. Aborisade	
Usefulness of Serum Pepsinogen I as a Biomarker in Early Diagnosis of Aetiology of Dyspepsia	509
M. A. Osundina, A. Akere, K. O. Akande, T. O. Oke, J. A. Otegbayo, A. O. Aje, S. O. Ola	
Factors which Influence Postgraduate Career Choice among Final-Year Medical Students	519
E. E. Akpo	
Comparing the Nigeria National Health Insurance Scheme Act, 2004 and the National Health Insurance Authority Act, 2022 – What is New and its Implications for the Health System	525
T. M. Ipinnimo, A. A. Omotoso, T. A. Bamidele, T. A. Sanni, D. O. Ibirongbe, M. T. Ipinnimo, O. O. Ibikunle	
Thrombotic Risk Assessment in Patients with Lymphoid Neoplasm seen at the Nnamdi Azikiwe University Teaching Hospital, Nnewi, Anambra State	533
U. J. Chilaka, N. Benedict, C. Kingsley, A. Clara, E. Geoffery, E. Chinedum, N. P. Onyinye	
Risk Factors and Pattern of Lower Limb Deep Venous Thrombosis in Gombe, North-Eastern Nigeria	541
S. Yuguda, A. I. Girei, K. M. Pindiga, R. A. Dachi, A. U. Usman, A. M. Umar, O. Tega, A. Saidu	
Socio-demographic Factors associated with Health-Seeking Behaviour and Clinical Outcomes among Patients attending Health Insurance Facility of a Teaching Hospital in Southwestern Nigeria	546
O. A. Solomon, O. O. Solomon, Y. O. Akinola, A. E. Olusola, D. O. Ibirongbe	
Determinants of Suboptimal Peak Inspiratory Flow Rates among Patients with Chronic Obstructive Pulmonary Disease in Southwest, Nigeria	553
A. O. Arawomo, G. E. Erhabor, M. O. Tanimowo, O. F. Awopeju, O. O. Adewole, B. O. Adeniyi, B. A. Afolabi, M. W. Ekundayo	
BRIEF COMMUNICATION	
COVID-19 Pandemic Response: A Primary Care Experience in Northwest Nigeria	562
G. C. Michael, B. A. Grema, S. T. Tanimu	
CASE REPORT	
A Fatal Case of a Huge Brain Abscess Misdiagnosed as Migraine Headache in an 18-Year-Old Woman	565
C. M. Opeyemi, F. T. Akinlade	
INDEX TO VOLUME 40, NO. 5, 2023	
Author Index	568
Subject Index	569



Usefulness of Serum Pepsinogen I as a Biomarker in Early Diagnosis of Aetiology of Dyspepsia

Utilité du Pepsinogène I Sérique en Tant que Biomarqueur dans le Diagnostic Précoce de l'Étiologie de la Dyspepsie

¹M. A. Osundina, ¹A. Akere, ¹K. O. Akande, ¹T. O. Oke, ¹J. A. Otegbayo, ¹A. O. Aje, ¹S. O. Ola

ABSTRACT

BACKGROUND: Dyspepsia, according to Rome III criteria, is defined as pain or discomfort centred in the upper abdomen in addition to symptoms like early satiety, postprandial fullness, bloating and nausea. Pepsinogens which are secreted by chief cells of the stomach play an important role in its physiology. They could determine the functional state of the mucosa in health and in diseased conditions. Serum levels of pepsinogen have aided the diagnosis of gastric pathologies such as atrophic gastritis, peptic ulcer disease and gastric cancer. Pepsinogen assay, being a simple, non-invasive procedure, can aid in determining the aetiology of dyspepsia especially in a resource-poor setting.

OBJECTIVE: This was to evaluate the diagnostic significance of serum pepsinogen I in patients with dyspepsia.

METHODS: The study involved 112 adult patients with dyspepsia and an equal number of controls. A questionnaire was used to obtain biodata, clinical features and other relevant information. The patients had abdominal ultrasound scan, urea breath test and upper gastrointestinal endoscopy (UGIE), while the controls had only abdominal ultrasound scan. Sera prepared from 10ml of venous blood from each participant were stored at -20° C and later analysed for pepsinogen I (PG I).

RESULTS: Females predominated in both groups (F:M = 1.4:1). The mean age of cases was 51±15.9 years and was similar to that of controls 51.4±16.5. The most frequent symptom was epigastric pain in 101 (90.2%) patients. Median pepsinogen I level in patients (28.5ng/ml) was significantly lower than in controls (68.8ng/ml) (p<0.001). The most frequent endoscopic finding was gastritis. Serum PG I level at a cut-off point of 79.5ng/ml had a specificity of 88.8% and sensitivity of 40% in identifying dysplasia.

CONCLUSION: Serum PG I level was lower in patients with dyspepsia than controls. It showed high specificity in identifying dysplasia and could be a biomarker for early gastric cancer. *WAJM* 2023; 40(5): 509–518.

Keywords: Dyspepsia, Serum Pepsinogen I, *Helicobacter pylori*, Biomarker.

RÉSUMÉ

CONTEXTE: La dyspepsie, selon les critères de Rome III, est définie comme une douleur ou une gêne centrée sur la partie supérieure de l'abdomen, en plus de symptômes tels qu'une satiété précoce, une plénitude postprandiale, des ballonnements et des nausées. Les pepsinogènes, sécrétés par les cellules principales de l'estomac, jouent un rôle important dans sa physiologie. Ils peuvent déterminer l'état fonctionnel de la muqueuse, qu'elle soit saine ou malade. Les taux sériques de pepsinogène ont facilité le diagnostic de pathologies gastriques telles que la gastrite atrophique, l'ulcère gastroduodénal et le cancer gastrique. Le dosage du pepsinogène, qui est une procédure simple et non invasive, peut aider à déterminer l'étiologie de la dyspepsie, en particulier dans un contexte de ressources limitées.

OBJECTIF: Évaluer l'importance diagnostique du pepsinogène I sérique chez les patients souffrant de dyspepsie.

MÉTHODES: L'étude a porté sur 112 patients adultes souffrant de dyspepsie : L'étude a porté sur 112 patients adultes souffrant de dyspepsie et un nombre égal de témoins. Un questionnaire a été utilisé pour obtenir les données biologiques, les caractéristiques cliniques et d'autres informations pertinentes. Les patients ont subi une échographie abdominale, un test respiratoire à l'urée et une endoscopie gastro-intestinale supérieure, tandis que les témoins n'ont subi qu'une échographie abdominale. Les sérums préparés à partir de 10 ml de sang veineux de chaque participant ont été conservés à -200 C et analysés ultérieurement pour le pepsinogène I (PG I).

RÉSULTATS: Les femmes prédominaient dans les deux groupes (F:M = 1,4:1). L'âge moyen des cas était de 51±15.9 ans et était similaire à celui des témoins 51.4±16.5. Le symptôme le plus fréquent était la douleur épigastrique chez 101 (90,2 %) patients. Le taux médian de pepsinogène I chez les patients (28,5 ng/ml) était significativement plus bas que chez les témoins (68,8 ng/ml) (p<0,001). Le résultat endoscopique le plus fréquent était la gastrite. Le taux sérique de PG I à un seuil de 79,5 ng/ml avait une spécificité de 88,8 % et une sensibilité de 40 % dans l'identification de la dysplasie.

CONCLUSION: Le taux de PG I sérique était plus faible chez les patients souffrant de dyspepsie que chez les témoins. Il a montré une spécificité élevée dans l'identification de la dysplasie et pourrait être un biomarqueur pour le cancer gastrique précoce. *WAJM* 2023; 40(5): 509–518.

Mots-clés: Dyspepsie, Pepsinogène I sérique, *Helicobacter pylori*, Biomarqueur.

¹Department of Medicine, College of Medicine, University of Ibadan/University College Hospital, PMB 5116, Agodi, Ibadan, Oyo State, Nigeria.

*Correspondence: Dr. Morenike Adedoyin Osundina, Department of Medicine, University College Hospital, PMB 5116, Agodi, Ibadan, Oyo State, Nigeria. Email: doynosundina@gmail.com Phone number: +2348035746715