

VIRTUAL ABSTRACT PRESENTATION

WA 001 V

Oral Dissolving Films of Native and Modified Starches from Underutilized Crops as Delivery Vehicles for Green Synthesized *Bridelia ferruginea*-Zinc Oxide Nanoparticles

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Background: Polymers from natural and indigenous sources can serve as cheap, non-toxic, biocompatible excipients in oral drug delivery systems. These advantages inform their use in the design of drug dosage forms.

Objectives: This study aimed at preparing and evaluating oral dissolving films (ODF) from the native and modified Sorghum and Bitter yam starches as vehicles for *Bridelia ferruginea*-zinc oxide nanoparticles and determining their antibacterial potentials.

Methods: Starches were extracted from Sorghum (*Sorghum bicolor*) and Bitter yam (*Dioscorea dumetorum*) and modified by pregelatinization. The ODF were formulated using the solvent evaporation method using a 1:1 ratio of native or modified starch and hydroxypropyl methylcellulose. Zinc oxide (ZnO) nanoparticles were synthesized using the aqueous extract of the stem bark of *Bridelia ferruginea*. Phytochemical and antioxidant properties of the plant extracts were determined, and nanoparticle formation was confirmed using optical and spectroscopic methods. The physicochemical properties of the ODF were evaluated, and the antimicrobial activities of the *Bridelia ferruginea*-ZnO nanoparticles (BF-ZnO NPs) and nanoparticle-loaded films were determined against selected bacteria using agar well and filter-disc diffusion methods. Data were analysed using Student's t-test and

ANOVA at $p < 0.05$.

Results: Flavonoids, alkaloids, phenols and tannins were present in the plant extract. *Bridelia ferruginea* stem bark aqueous extract possessed antioxidant activity. Formation of ZnO nanoparticles was observed as a color change from dark brownish green to light green and confirmed via UV-Vis spectroscopy. Presence of proteins and other functional groups important in the bio-reduction and capping of the Zinc salt into zinc oxide were revealed. Obtained ODF from both starches and their modified forms gave good folding endurance, surface pH 6.19 - 6.58, and disintegration times less than 10 seconds. The BF-ZnO NPs film formulations exhibited significant antibacterial activity against *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Escherichia coli* and *Klebsiella sp* comparable to trimethoprim-sulphamethoxazole. There were no significant differences in the properties of the starches used.

Conclusion: Native and modified starches from sorghum and bitter yam formed good oral dissolving films useful for the delivery of *Bridelia ferruginea*-ZnO nanoparticles for the potential treatment of bacterial infections.

Keywords: Oral dissolving films, Bitter yam, Sorghum, Zinc oxide nanoparticles, *Bridelia ferruginea*

WA 002 V

Association between medication adherence and health-related quality of life of adult hypertensive patients attending a tertiary hospital in Ghana

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Background: Hypertension is a leading cause of cardiovascular diseases, strokes, and kidney failures globally. Despite the availability of effective medications, non-adherence to prescribed treatment regimens remains a significant barrier to optimal health outcomes, leading to uncontrolled blood pressure and decreased quality of life (QoL).

Objective: This study investigates the association between medication adherence and health-related quality of life (HRQoL) among adult hypertensive patients attending tertiary hospitals in Ghana.

Methods: A prospective cross-sectional analytical study design was employed, and conducted within a year. Data was collected using structured questionnaires and analyzed using

STATA version 17. Descriptive statistics were used to summarize the data, and chi-square tests assessed the association between medication adherence and Health Related Quality of life (HRQoL).

Results: The median age of the study respondents was 64 years. Majority (86.5%) of the respondents fell into the category of low adherence. Medication adherence was significantly associated with better HRQoL. A significant association was found between other chronic conditions and HRQoL ($p=0.043$). Educational level significantly impacts

adherence ($p=0.032$). Patients who adhered to their medication regimen reported higher scores in physical, psychological, and social dimensions of quality of life compared to non-adherent patients.

Conclusion: Improving medication adherence led to enhanced HRQoL among hypertensive patients.

Keywords: Medication adherence, Health-related quality of life (HRQoL), Adult Hypertensive patients, Tertiary Hospital, Patient outcomes, Hypertension.

WA 003 V

Patients' perceptions of risks associated with side effects: implications for medication counseling, safety, and adherence.

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Background: Effective communication of medication side effects is crucial for informed patient decision-making. Medication package inserts (MPIs) provide essential safety information, but patients often misinterpret risk descriptors.

Objectives: The study assessed patients' understanding and perception of medication side effect risk descriptors vis-à-vis information satisfaction, perceived severity of side effects, perceived overall health risk, impact of risk presentation on medication adherence, and risk estimation.

Methods: A cross-sectional survey was conducted among 750 patients attending five conveniently selected community pharmacies in Ibadan, Nigeria. Participants were consecutively assigned to receive one of three questionnaire formats, each presenting hypothetical medication side effects using the five bands of different risk descriptors (verbal, percentage, and natural frequency). Responses to perceived satisfaction, severity, health risk, medication adherence, and risk estimates were collected using a six-point Likert scale.

Data were analyzed using ANOVA to assess mean differences in perception across the three side effect descriptors formats with SPSS for Windows version 27.

Results: Patients preferred percentage descriptors for common side effects but favored verbal descriptors for rare ones. Risk overestimation was highest with verbal descriptors and lowest with percentage descriptors. Percentage descriptors significantly influenced medication adherence decisions.

Conclusion: The study highlights patients' preference for common side effects to be described in percentages while rare and very rare side effects to be described in verbal format. Risk descriptions in percentages were less overestimated. A combined approach using numerical and verbal descriptors may enhance patient comprehension and adherence.

Keywords: Risk estimation, Side effects, Verbal descriptors, Natural frequency descriptors, Percentage descriptors

WA 004 V

Prescription patterns of antimalarial drugs for pregnant women attending antenatal clinic in University of Ilorin Teaching Hospital, Ilorin, Kwara state, Nigeria

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Background: Poor compliance to treatment guidelines of malaria in pregnancy portends risks. Total compliance to guidelines is thus important. Objective: To evaluate the prescription patterns of antimalarial drugs recommended for pregnant women attending the antenatal clinic so as to determine compliance of prescribers to WHO treatment guidelines for malaria in pregnancy, 2023.

Methods: A descriptive, cross-sectional, prospective study of prescription records of pregnant women prescribed antimalarial drugs at the clinic over a 6-month period (February-July 2024) was carried out to assess the prescriptions patterns and analyzed for compliance to guidelines.

Results: Among 104 records reviewed, the malaria prevalence for first, second and third trimesters were 38.5%, 38.5% and 23% respectively. In all the trimesters, Sulfadoxine-Pyrimethamine (90.3%) was the most prescribed for prophylaxis while Artemether-Lumefantrine (7.7%) was the most prescribed for treatment. Majority were oral drugs (98.1%) and prescribed using non-generic names (56.7%). First trimester showed 8.1% guidelines adherence while 100% was recorded in second and third trimesters. All of the

antimalarial drugs prescribed were in the current Nigeria Essential Medicines List.

Conclusion: Although guideline compliance was observed in second and third trimesters, poor adherence in the first trimester and use of non-generic names should be addressed.

Keywords: Antimalarial Drugs, Pregnant Women, Prescription Patterns, Compliance to Guidelines

WA 005 V

Pharmacist-led antimicrobial stewardship intervention on outcomes of pediatric community acquired pneumonia in pediatric department of a tertiary hospital in Imo State, Nigeria

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Background: Antimicrobial stewardship programs in healthcare rightly directs the prescription of antibiotics by encouraging the utilization of narrow spectrum antibiotics, improve and maximize drug dosages and reduce duration of use of the prescribed antibiotic. This is right foundation for pediatric community acquired pneumonia therapy. In low-middle income country this has not been achieved due to inadequate knowledge of standard treatment guidelines and not applying the concept of antimicrobial stewardship in clinical practice.

Objective: Aim was to assess potential impact of pharmacist-led antimicrobial stewardship on antibiotic treatment outcomes for pediatric community acquired pneumonia, ensuring compliance to standard treatment guidelines.

Methods: A cross-sectional study was conducted among pharmacists and paediatric physicians in hospital setting. Questionnaires assessed their knowledge of paediatric community acquired pneumonia, antimicrobial stewardship, and perceived impact of antimicrobial stewardship on treatment outcomes. Statistical analyses

compared knowledge scores and perceptions between groups.

Results: Pharmacists had significantly greater knowledge of antimicrobial stewardship than physicians. However, compliance to standard treatment guidelines was suboptimal among both groups. Few physicians agreed on the importance of pharmacist leading antimicrobial stewardship. Pharmacists demonstrated a significantly higher perceived impact of antimicrobial stewardship on improving treatment outcomes.

Conclusion: Education and training are needed to improve knowledge of pediatric community acquired pneumonia and antimicrobial stewardship for pharmacists and physicians. An infectious disease pharmacist with or without an infectious disease physician can lead an antimicrobial stewardship in compliance to treatment guidelines for positive outcomes in antibiotic treatment of paediatric community acquired pneumonia.

Key words: Antibiotics, stewardship, paediatric, pneumonia, compliance

Factors affecting non-adherence to medication among patients with major depressive disorder (MDD) at Federal Neuropsychiatric Hospital, Maiduguri, Borno State, Nigeria.

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Background: Medication adherence is crucial for effective management of Major Depressive Disorder (MDD). However, non-adherence remains a significant challenge, influenced by various factors.

Objectives: This study aims to evaluate the level of medication non-adherence among patients with MDD and identify the sociodemographic and patient-related factors associated with non-adherence.

Methods: A cross-sectional study was conducted at the Federal Neuropsychiatric Hospital, Maiduguri, North-eastern Nigeria, involving 326 patients with MDD. Data were collected using a structured questionnaire, including the Medication Adherence Rating Scale (MARS), Oslo Social Support Scale (OSSS-3), and Belief about Medicines Questionnaire (BMQ) to assess the adherence levels and its associated factors.

Results: The level of non-adherence was 9.5%. Its associated factors include male gender (COR =4.221, 95 %CI=1.914-

9.311; p<0.001), being on paid employment (COR=4.881; 95%CI=1.505-15.833; p=0.008), being on sick leave (COR=35.500; 95 % CI=6.451-195.363; p<0.001), being unemployed (COR=6.174; 95%CI=1.921 - 19.844; p=0.002), having a poor level of social support (COR = 4.200; 95 % CI = 1.583 - 11.145; p=0.004), having full insight into the disease (COR = 0.091; 95 % CI=0.038 - 0.219; p<0.001), having a weak necessity belief (COR = 9.341; 95% CI=3.705 - 723.547; p<0.001) and having a strong concern belief (COR = 13.364; 95 % CI = 4.550 - 39.254; p<0.001).

Conclusions: The study revealed that being male, unemployed, employed but on sick leave, having a poor level of social support, having full insight into disease, having a weak necessity belief, and having a strong concern belief about medicines are associated with non-adherence.

Keywords: Depression, adherence, North-eastern Nigeria.
RECOMMENDATION: ACCEPT FOR PODIUM PRESENTATION

Evaluation of health outcomes among patients with type 2 diabetes mellitus and/or hypertension in a metropolitan city - an interventional study

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Background: It is important to evaluate patients' health outcomes to project pharmacists' interventions.

Objectives: To evaluate the impact of pharmacists-led intervention on health outcomes of patients with diabetes and/or hypertension.

Methods: A pre-post interventional study was carried out among patients with diabetes and/or hypertension at 11 selected community pharmacies. Data collection form was utilised for patients' data on sociodemographic characteristics, point-of-care tests, anthropometric

measurements and physical activities. Patient-specific educational intervention to address identified deficiencies and three-month post-intervention data collection were carried out by pharmacists.

Results: A total of 241 [diabetes (48); hypertension (193)] patients aged 56.50 ±12.6 years completed the study. Positive health outcomes observed were significant reductions (pre-intervention vs post-intervention) in patients' systolic blood pressure (mmHg) [diabetes: 138.15 ±21.60 vs 127.19 ±18.65, p=0.002; hypertension: 147.24 ±88.97 vs 129.17 ±10.79, p=0.005], diastolic blood pressure (mmHg) [diabetes: 84.08

±12.44 vs 80.02 ±7.95, p<0.001; hypertension: 88.24 ±13.81 vs 81.80 ±8.24, p<0.001], fasting blood glucose (mg/dL) [diabetes: 147.17 ±68.03 vs 101.79 ±10.35, p<0.001; hypertension: 101.67 ±26.51 vs 92.70 ±9.00, p<0.001], and visceral fat [diabetes: 9.40 ±3.91 vs 9.15 ±3.88, p=0.265; hypertension: 9.76 ±4.65 vs 9.60 ±4.47, p<0.001], and increased physical activity in metabolic equivalent minutes/week [diabetes: 1015.32 ±845.44 vs 1193.08 ±738.74, p<0.001; hypertension: 1309.06 ±1094.13 vs 1429.93 ±1026.46, p<0.001]. Geriatric patients with diabetes

had significantly less diastolic blood pressure (p=0.007) when compared with the adult patients. Visceral fat (p=0.023) and waist-hip ratio (p=0.001) were significantly higher in geriatric patients with hypertension.

Conclusion: The pharmacists-led intervention resulted in improved health outcomes for the patients.

Keywords: Point-of-care testing, Interventional study, diabetes, hypertension, health outcomes

WA 008 V

Predictors of non-disclosure of serostatus to sexual partners by patients on Antiretroviral Therapy (ART) at Randle General Hospital, Surulere, Lagos State.

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Background: Non-disclosure of Human Immunodeficiency Virus (HIV) status to sexual partners remains a significant issue, often influenced by fears of abandonment, stigmatization, and discrimination.

Objective: This study aimed to assess the rate of serostatus disclosure, identify common reasons for non-disclosure, and determine predictors associated with non-disclosure among patients receiving antiretroviral therapy at Randle General Hospital, Lagos.

Methods: A descriptive cross-sectional study was conducted among HIV-positive individuals in heterosexual relationships who consented to participate. Ethical approval was obtained from the Health Research Ethics Committee (HREC) Lagos University Teaching Hospital (LUTH) while research approval was gotten from Lagos State Health Service Commission. Data were collected using a pretested, semi-structured interviewer-administered questionnaire.

Results: A total of 304 respondents participated, with a majority being female (77.3 %). The average age was 38.8

±10.1 years. The disclosure rate was 65.1 %, with primary reasons for non-disclosure being fear of abandonment (49.1%) and stigmatization/discrimination (48.1 %). Factors significantly associated with disclosure included age, marital status, partner's employment status, cohabitation, having children, and income. Additionally, HIV-related factors such as knowledge of a partner's serostatus, belonging to a support group, duration of awareness, and witnessing public disclosure influenced disclosure behavior. Married individuals (OR 0.18, p=0.037) and those with children (OR 0.28, p=0.046) were more likely to disclose, while those unaware of their partner's serostatus (OR 134.11, p<0.001) or with a seronegative partner (OR 12.46, p=0.015) were more likely to withhold disclosure.

Conclusion: The disclosure rate was moderate, with fear of abandonment and stigma being major barriers. Marriage and parenthood encouraged disclosure, while uncertainty about a partner's status or knowing they were HIV-negative strongly predicted non-disclosure.

Keywords: HIV status, Non-disclosure, Stigmatization, Serostatus, Antiretroviral therapy

WA 009 V

An assessment of the quality of pharmaceutical care services rendered to hypertensive patients in a Tertiary Hospital in Ghana.

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Background: Hypertension is a major public health concern in Ghana, affecting 30.3% of adults, yet, only 35 % are aware of their status, and just 19 % achieve blood pressure control. Effective pharmaceutical care is essential in hypertension

management for improving outcomes, but its quality in Ghanaian tertiary hospitals remains understudied, hindering targeted interventions.

Objectives: This study evaluated the quality of pharmaceutical care services for hypertensive patients at Greater Accra Regional Hospital, a major tertiary facility in Ghana.

Methods: A cross-sectional survey was conducted using the SERVQUAL model to assess pharmaceutical care quality among hypertensive patients. Purposive sampling selected 105 hypertensive patients with at least three months of treatment. Data were collected via a structured questionnaire. Multiple linear regression identified factors influencing service quality, and a chi-square test evaluated associations between demographics and satisfaction levels.

Results: Overall, 59 % of respondents reported satisfaction with pharmaceutical care services. Satisfaction was

significantly influenced by ease of access and duration of care. Qualitative analysis highlighted positive perceptions of physical facilities and service reliability, with medication supply consistency and staff competence emerging as key factors.

Conclusion: While pharmaceutical care was high, systemic gaps in accessibility and responsiveness persist. Ensuring consistent medication supply and maintaining high service quality are crucial for better patient experiences and improved hypertension management. These steps are vital to advancing equitable care and reducing the burden of uncontrolled hypertension.

Keywords: Pharmaceutical Services, SERVQUAL, Hypertension

WA 010 V

Gestational hypertension with pre-eclampsia: prevalence, risk factors and management at the greater Accra Regional Hospital in Ghana.

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Background: Gestational hypertension and pre-eclampsia pose serious risks to maternal and fetal health, contributing to about 9 % of maternal deaths in Ghana. Risk factors include maternal age, obesity, pre-existing hypertension, family history, and conditions like diabetes. Optimizing therapy is critical to reducing morbidity and mortality.

Objectives: This study assessed the prevalence, risk factors, and management of gestational hypertension with pre-eclampsia at a tertiary hospital in Ghana.

Methods: A prospective cross-sectional study was conducted at the Greater Accra Regional Hospital. Using purposive sampling, 95 pregnant women diagnosed with gestational hypertension (receiving care for at least three months), were enrolled. Data were collected via a structured questionnaire, physical assessment and analyzed using SPSS (Version 25).

Results: The prevalence of gestational hypertension was 4.38 %, with obesity as a major risk factor (73.7 %). A history of gestational hypertension was present in 40 % of cases, with most diagnoses occurring at 27-29 weeks gestation. Pharmacological treatment was given to 68 % of participants, with 14 % experiencing side effects.

Conclusion: Obesity and a history of gestational hypertension were key risk factors, necessitating targeted obesity interventions and intensified monitoring. Early diagnosis, pharmacological treatment, and lifestyle modifications, were key to effective management. Strengthening preconception and antenatal care strategies is vital to mitigating the burden of gestational hypertension and improving maternal-fetal outcomes in Ghana.

Keywords: Gestational hypertension, Pre-eclampsia, Prevalence, Risk factors

WA 011 V

Patterns of drug use and factors affecting adherence to antidiabetic medications in adults with Diabetic Ketoacidosis (DKA) in two reference hospitals in Lagos State.

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Background: Non-adherence to antidiabetic medication is a major concern in the treatment of Diabetes ketoacidosis and undermines the goals of treatment.

Objective: To assess prevalence and factors contributing to non-adherence to antidiabetic medication among Diabetic Ketoacidosis (DKA) patients in the emergency units/wards admitted at Nigerian Navy Reference Hospital Ojo, and Naval Dockyard Medical Centre Victoria Island, Lagos.

Methods: A descriptive cross-sectional study was carried out at emergency units and endocrinology wards of Nigerian Navy Reference Hospital Ojo, and Naval Dockyard Medical Centre Lagos between December 2023 and August 2024. Study participants were systematically sampled, and data regarding their anti-diabetic medication non-adherence was collected using a structured questionnaire. Data entry was done using Microsoft Excel Version 2010, and analysis was carried out using STATA version 13. The odds ratio was used to determine the strength of association between diabetic

medication non-adherence and associated factors.

Results: A total of 289 patients participated in the study. More than one-third (98, 38.1 %) of the participants were non-adherent to their antidiabetic drugs. Age above 60 years (AOR = 6.26, 95 % CI = 1.009-39.241, P = 0.049) and duration of DKA above 5 years (AOR = 1.87, 95 % CI = 1.034-3.392, P = 0.038) were independently associated with non-adherence to anti diabetic. The most common reasons for non-adherence were cost of drugs and forgetfulness.

Conclusion: Prevalence of non-adherence to anti diabetic medication among DKA patients was higher than that revealed in previous studies in Nigeria. Patients with age above 60 years were six times more likely to be non-adherent to their anti-diabetic medications. Future studies on strategies to improve adherence rate should be considered.

Keywords: non-adherence, contributing factors, antidiabetic medication, diabetic ketoacidosis

WA 012 V

Identification and resolution of drug therapy problems among adult hypertensive patients receiving care at a Secondary Healthcare Facility in Lagos State, Nigeria

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Background: Effective Identification and management of drug therapy related problems in hypertensive patients are critical to improving health outcomes and quality of life, aligning with the core objectives of pharmaceutical care.

Objective: This study aimed to assess the prevalence, causes and resolution of drug therapy problems encountered among adult hypertensive patients at Randle General Hospital, Surulere, Lagos State, Nigeria.

Methods: A prospective study analyzed medical records of 351 hypertensive adult patients attending the Hospital's clinic over five weeks. Data was collected using a structured form adopted from the Pharmaceutical Care Network Europe Classification Version 9.1 to categorize drug therapy problems (DTPs) and interventions.

Results: The study revealed a 61.54 % prevalence of DTPs among adult hypertensives with a mean age of 60.31±12.40 years, majority of which were related to treatment effectiveness (88.94%). The main causes of the DTPs were patient-related issues (39.52 %), drug selection (33.47 %) and dose selection (25.81 %). Pharmacist-led interventions were primarily implemented at the patient (37.80 %), prescriber (33.60 %), and drug levels (27.80 %), with 99.54 % of all interventions being accepted.

Conclusion: The high prevalence of drug therapy problems among adult hypertensive patients at Randle General Hospital underscores the necessity of integrating pharmaceutical care into hypertension management in order to identify and resolve drug therapy problems.

Keywords: Hypertension, Drug Therapy problems, Identification, Resolution, Prevalence, Patient

Assessing the causes of drug abuse among Nigerian university undergraduate students

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Background: Drug abuse is an emerging global public health issue with the burden increasing steadily in Nigeria.

Objective: To evaluate the causes of drug abuse among undergraduate students of the Faculty of Pharmaceutical Sciences, Chukwuemeka Odumegwu Ojukwu University (COOU), Igbariam, Nigeria.

Methods: A cross sectional descriptive study was conducted among 358 undergraduate pharmacy students of COOU using 15-itemed structured questionnaire. Systematic random sampling technique was employed. Data collected was analyzed using SPSS version 23 and summarized using descriptive statistics: frequency, percentages. Chi square test was used to determine the relationship between demographics and the causes of drug abuse among the undergraduate students. $P < 0.05$ was considered significant. Period of data collection was from November to December

2023.

Results: A total of 358 students participated in the study of which 196 (54.7%) were females and 162 (45.3%) males. Majority of the students 271(60.6%) were 21-25 years of age. About 173 (48.3%) students believed that drug abuse was due to influence of friends, while the most abused drug by students was alcohol 165(46.1%). Also, 193(53.9%) students believed that counseling was the best way of reducing drug abuse among University students.

Conclusion: Alcohol was the most abused drug, while influence of friends was the major cause of drug abuse. Admission into mental hospital was the major consequence of drug abuse while counseling was the best way of reducing drug abuse among students. Drug abuse should be included as a compulsory course in University curriculum and rehabilitation programs established for students with drug addiction.

Quality survey of oral metronidazole suspensions marketed in Lagos, Nigeria

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Background: The World Health Organisation's (WHO) placement of metronidazole preparations under Access Group Antibiotics (a group of essential antibiotics that should be widely available, affordable and quality assured); the availability of capacity for local manufacture of the preparations in Nigeria and the Government policy thereof make a quality survey on metronidazole benzoate suspensions crucial.

Objective: The objective of the study was to determine the compliance of locally available metronidazole benzoate oral suspension with compendia and national quality specifications.

Methods: A mystery shopping approach was employed in the convenience sampling of eleven (11) brands of metronidazole benzoate suspension from pharmacies in Lagos State, Nigeria.

The samples were evaluated for content of active, microbial purity and pH using the techniques and specifications stated in the monographs of WHO International Pharmacopoeia. They were also assessed for compliance with National Agency for Food and Drug Administration and Control (NAFDAC) specifications on labelling and fill volume.

Results: All the brands passed identity and microbiological tests. However, only seven brands (63%) passed labelling requirements, seven brands (63%) passed pH test, ten brands (91%) passed fill volume and seven brands (63%) passed assay of the active pharmaceutical ingredient (API). The brands that

failed assay had values higher than pharmacopoeia upper limit. In all, three (27%) out of eleven brands met all the quality specifications.

Conclusion: Indigenous manufacturers of metronidazole benzoate suspensions used the right API for their products and took measures to prevent them from microbial contamination. However, majority of the products failed to comply with other tested quality specifications.

Keywords: quality survey, local manufacturer, metronidazole, NAFDAC

WA 0015 V

Cardiovascular diseases-related emergency and hospitalizations in the University of Port Harcourt Teaching Hospital

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Background: Cardiovascular Diseases (CVDs) present as a global burden and a public health issue. Nigeria has a high CVD burden with significance in the urban areas. The University of Port Harcourt Teaching Hospital (UPTH) is a tertiary healthcare institution located in Port Harcourt, a bustling urban city in Rivers State, Nigeria.

Objective: This study retrospectively determined the prevalence, types, age and gender distribution of CVDs-related presenting emergencies and hospitalizations in UPTH. **Method:** This study adopted an established retrospective cross-sectional study using a pre-designed patient data collection form for a total of 7354 registered patients with diagnosis of cardiovascular disorders who met the inclusion criteria of emergency visits and hospitalizations in UPTH over a 12-month period (January to December 2023). The data collected were analysed using the statistical package for social science (SPSS version 23.0) and Microsoft excel.

Results: Twenty-one (21) CVDs were identified as the cause of emergency visits and hospitalizations. The prevalence rate of CVDs over the 12-month study period was 19.58 %, with higher prevalence (25.9 %) in patients within 50 and 59 years of age and male dominance (51.1 %). The most common and respective prevalence being Cerebrovascular accident (CVA: 31.8 %) >, Hypertension (HTN: 28.1 %) >, Congestive Cardiac Failure (CHF: 20.4 %) > and Hypertensive Heart Disease (HHD: 7.5 %).

Conclusion: This study concluded that CVDs prevalence at the study site and period was high and that Cerebrovascular accident (CVA) presented as the most common condition. Study suggests the need for health education and information to address this burden.

Keywords: Cardiovascular Diseases, University of Port Harcourt Teaching Hospital (UPTH), Emergency Visits & Hospitalizations, Cerebrovascular Accident.

Stimulation of NADH-oxidoreductase by lithium chloride accelerated liver regeneration after ethanol-induced hepatotoxicity in rats

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Background: Globally, alcohol misuse is the main cause of hepatotoxicity. Although the processes of liver regeneration following ethanol-induced liver toxicity have not yet been thoroughly studied, timely commencement of compensatory liver regeneration by lithium chloride (LiCl) following ethanol-induced hepatotoxicity is essential for ultimate recovery.

Objectives: By employing a pharmacological blocking method in rats, we examined the function of lithium chloride-induced NADH oxidoreductase activation in liver regeneration following ethanol hepatotoxicity.

Methods: Twenty-five male rats were randomly divided into five (5) groups (n=5). The dose of ethanol (ETH) administered was 1 ml/200 g of 25% ethanol for 21 days. The normal control (NC) (Group I) received only distilled water. Group II, III, IV and V received distilled water, LiCl 50 mg/kg 100 mg/kg and silymarin 100 mg/kg (standard drug), respectively. On the twenty-second day, rats were sacrificed by cervical dislocation under isoflurane anesthesia, livers were collected, and stored in the freezer. NADH oxidoreductase

gene expression was carried out.

Results: Ethanol plus distilled water treated group showed a significant ($p < 0.001$) downregulation of NADH oxidoreductase relative to the distilled water-treated group. A significant ($p < 0.001$) upregulation of NADH oxidoreductase were observed in ETH + LiCl 50 mg/kg and ETH + Silymarin 100 mg/kg in comparison with ETH + Distilled Water. In contrast, a downregulation effect of NADH oxidoreductase was shown by ETH + LiCl 100 mg/kg relative to ETH + Distilled Water.

Conclusion: Our study has revealed a novel role of NADH-oxidoreductase by LiCl in liver regeneration after ethanol-induced liver toxicity and identified stimulation of NADH-oxidoreductase by LiCl as a potential therapeutic target to improve liver regeneration after Ethanol-Induced liver toxicity.

Key words: Lithium chloride, NADH-oxidoreductase, Ethanol, Hepatotoxicity and Genes