

Selected Abstracts Presented At The Annual General Meeting And Scientific Conference Of The Society For Gastroenterology and Hepatology in Nigeria (Soghin), Enugu, July 2023

Abstract 1

PD-L1 expression in gastric cancer: A 10-year retrospective study at Lagos University Teaching Hospital, Nigeria

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Background/aim: The aim of this study is to determine the expression of Programmed death-ligand 1 (PD-L1) in gastric cancers diagnosed at the Lagos University Teaching Hospital (LUTH) from 2010 to 2019 with a view to correlating clinicopathologic parameters with PD-L1 expression. **Methodology:** The slides and paraffin blocks of all histologically diagnosed cases of gastric cancer at the Anatomic and Molecular Pathology Department, LUTH during the study period were retrieved and reviewed. PD-L1 expression was determined by immunohistochemistry and scored using the Combined Positive Score (CPS). **Results:** Of the 65 cases studied, the intestinal histologic type was the most frequent (63.1%) whereas the diffuse type constituted 36.9% of cases. The majority of the intestinal type occurred in males (82.9%). The most prevalent grade was the poorly differentiated type (49.2%), and the least being the well-differentiated (9.2%). Stage III tumors were the most frequent in the gastrectomy group (58.3%). PD-L1 expression was positive in 4 (6.2%) of the 65 cases evaluated. There was equal distribution of high (50.8%) and low (49.2%) CD8 expression in the tumors. There was no significant association between PD-L1 expression and age, sex, grade, stage, and CD8 expression. **Conclusion:** PD-L1 expression was low in this study and

was only seen in the intestinal type of gastric cancer. There was no association between CD8⁺ T cell infiltration and PD-L1 expression nor between clinicopathologic parameters and PD-L1 expression. Anti-PD-L1 immunotherapy may benefit only a few patients with intestinal-type gastric cancer in this environment and the possibility of a better outcome for such patients.

Keywords: Gastric cancer, PD-L1 expression, immunotherapy

Abstract 2

Immunohistochemistry expressions of programmed death-ligand 1 in colorectal carcinoma among Nigerians

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Background: Colorectal carcinoma is the commonest gastrointestinal malignancy in Nigeria with a dismal 5-year survival rate. Interactions between the CD8⁺ T lymphocytes and the immune checkpoints such as CTLA-4 and PD-L1 expressions are important. Novel antibodies have been developed against these immune checkpoints and have been found to improve clinical outcomes in many solid organ malignancies. We aimed to determine immunohistochemical expression of PD-L1

in resected CRC cases assembled on tissue microarray blocks. **Methodology:** Representative blocks and clinical information of resected CRC cases between 2010 and 2019 were retrieved from the archives of the Department of Anatomic and Molecular Pathology. Tissue microarray (6 × 4) blocks were constructed with 2mm core needles. Immunohistochemistry using an Anti-PD-L1 rabbit monoclonal antibody (clone EPR19759 #213524, 1:200 Abcam, Massachusetts) was carried out according to manufacturer's instruction. **Results:** The study included 170 cases, of which 144 cases had sufficient tissue for analysis. The peak incidence was observed in the 50–59 age group. Approximately 80.1% of the cases were in T3 and T4 stages. Only 8 (5.6%) out of 144 cases were positive for PD-L1. All the PD-L1 positive cases were either right-sided CRC (6/68) or rectal cancer (2/3). Of the 7 positive cases with available histological grading, 4 were poorly differentiated/mucinous variants and 3 cases were moderately differentiated. **Conclusion:** PD-L1 expression in CRC was low (5.6%), and showed strong associations with higher tumor grades ($P < 0.013$), right-sided tumors ($P < 0.002$), and rectal cancer. There was no association with age, tumor stage, and lymph node status.

Keywords: Colorectal cancer, PD-L1, immunohistochemistry, microarray

Abstract 3

Relationship between serum vitamin D levels and overt hepatic encephalopathy in patients with liver cirrhosis

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Background: Hepatic encephalopathy (HE) is one of the major complications of liver cirrhosis and manifests as a wide spectrum of neuropsychiatric abnormalities, from subclinical changes to confusion and coma leading to frequent hospitalization of patients. Metabolic functions of the liver include vitamin D synthesis which is reportedly reduced in patients with liver cirrhosis. Vitamin D has anti-inflammatory and immunomodulatory functions apart from its function in calcium and phosphate homeostasis. This may impact on the survival outcomes in HE. The aim of this study was to determine the relationship between

vitamin D levels and overt HE in patients with liver cirrhosis. **Methods:** This was a cross-sectional study that included 106 adult subjects of both genders with liver cirrhosis and 106 patients without any evidence of liver cirrhosis. All study participants had their blood samples assayed for vitamin D levels. HE was graded using West Haven Criteria. Overt HE was defined as grade 2–4 of West Haven Criteria. Vitamin D deficiency was defined as serum vitamin D level of 20ng/mL or less, vitamin D insufficiency as 21–29ng/mL, and vitamin D sufficiency as ≥30ng/mL. **Results:** The median vitamin D level in the liver cirrhosis patients with grade 0 HE was 34.00ng/mL with interquartile range (IQR) of 10ng/mL, grade 2 was 16.00ng/mL with IQR of 10.00ng/mL, grade 3 was 14.78ng/mL with IQ of 7.00ng/mL while that of grade 4 was 22.05ng/mL with IQR of 5ng/mL. There was a significant inverse correlation between vitamin D status and grade of overt HE using a West Haven Criteria ($r = -0.683$; $P < 0.001$). **Conclusion:** There is an inverse relationship between vitamin D levels and overt HE. In these patients, vitamin D deficiency is universal and worsens with increasing severity of HE.

Keywords: Vitamin D, liver cirrhosis, hepatic encephalopathy

Abstract 4

Nonalcoholic fatty liver disease in sub-Saharan Africa: A descriptive study of the range of histopathological findings in the south-west zone of Nigeria

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Background: Nonalcoholic fatty liver disease (NAFLD) is increasingly becoming a public health problem worldwide. It has been shown that a very strong link exists between NAFLD and the risk of other systemic diseases. Currently, data on the incidence of NAFLD are limited in much of sub-Saharan, where hepatitis B virus (HBV) infection is also endemic. Thus, there is an impelling need to assess if NAFLD makes any significant contribution to the severity of HBV-associated chronic liver disease in patients who develop a simultaneous NAFLD. **Aim:** This study describes the range of the histopathological findings in NAFLD and assesses the impact of NAFLD on the severity of HBV-associated chronic hepatitis. **Methodology:**

We retrospectively studied 120 cases of histologically diagnosed NAFLD within the 5-year study period. Brunt scoring system was used to grade and stage NAFLD cases with or without chronic hepatitis B (CHB) infection in each case. Data were analyzed using descriptively and a Chi-square test was done. **Result:** The mean age was 45.78 ± 12.29 years and female predominance was observed. HBV-associated CLD patients with histological evidence of NAFLD was present in 55 (45.83%) and NAFLD in patients without CHB was 54.16%. There was a statistically significant association of advanced age with the cohort cases with NAFLD without associated CHB infection ($P < 0.001$). The grading, fibrosis stage was found not to be related to the age group or gender in any of the cohorts of cases. **Conclusion:** This study is unable to identify any relative contribution of NAFLD to the severity of the grade and stage of CHB on liver biopsy.

Keywords: Chronic liver disease, HBV infection, NAFLD, steatosis

Abstract 5

Microbiological spectrum and antibiotic susceptibility of organisms associated with spontaneous bacteria peritonitis in liver cirrhotic patient seen at NAUTH, NNEWI

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Background: Spontaneous bacterial peritonitis (SBP) is a common and severe complication of liver cirrhotic ascites. Earlier studies documented Gram-negative enteric organisms as the commonest etiologic agents, but recent studies have shown an increasing prevalence of Gram-positive and multidrug-resistant pathogens, with regional differences in their pattern of occurrence. This study was conducted to determine the microbiological spectrum and antibiotic sensitivity pattern among patients with SBP in NAUTH, Nnewi. **Materials and Methods:** This was a hospital-based cross-sectional study that included 132 liver cirrhotic patients with ascites. Sociodemographic

and relevant clinical data were collected using a structured questionnaire. Diagnosis was established using clinical observations and laboratory criteria that were consistent with SBP. The susceptibility test for the different isolates was done using the Kirby Bauer disc diffusion method in accordance with the clinical and laboratory standard guidelines for antimicrobial susceptibility testing. The data generated were statistically analyzed. **Results:** Out of the 132 participants recruited for this study, 29 (22.0%) had SBP. The commonest isolate in this study was a Gram-positive organism, *Staphylococcus aureus* 8 (38.1%), while the isolated Gram-negative organisms were *Escherichia coli* 7 (33.30%), *klebsiella pneumoniae* 3 (14.30%) and *Pseudomonas aeruginosa* 2 (9.50%). The Gram-negative isolates were most susceptible to meropenem and amikacin and least susceptible to cefuroxime while *staph aureus* was most susceptible to amikacin and cefoxitin. **Conclusion:** SBP is common among patients with cirrhotic ascites. The commonest isolate was *Staph aureus*, Gram-positive aerobes. The isolates were more susceptible to Amikacin, Meropenem, and Cefoxitin than other tested antibiotics.

Keywords: Gram-negative, Gram-positive, liver cirrhotic ascites, spontaneous bacteria peritonitis, susceptibility

Abstract 6

Gastrointestinal endoscopy capacity in Nigeria: The strength and challenges

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Background/Objective: The burden of gastrointestinal disease (GI) is increasing globally, especially in low-and-middle-income countries (LMICs) where mortality rates are high, due to the late presentation of the disease. Early detection programs aimed at identifying early-stage GI cancers rely on endoscopy. However, endoscopic capacity in countries in sub-Saharan Africa, like Nigeria, is unknown. Our study examined access to endoscopy centers, capacity, workforce, and costs in Nigeria. **Methods:** A mixed method needs assessment was implemented where 32 physicians who represented 35 states in Nigeria were interviewed about endoscopy capacity, access, costs, workforce volume, and solutions to current barriers. A list of endoscopy facilities was compiled through interviews and was geolocated. A cost-distance model using open-source population density (GeoData Institute) and road network data (OpenStreetMap) estimated population-level travel time to the nearest facility using GIS software (ArcMAP) to determine access to facilities. **Results:** There

are 198 endoscopy facilities in Nigeria, 138 are private and 60 are public. Of 198 facilities, 170 are functional, 19 are nonfunctional, 7 are partially functional, and 2 have unknown functionality. About 207 consultants perform endoscopies and a range of 3–70 upper endoscopies per center and 3–20 colonoscopies are performed every month in Nigeria. Over 80% of the population have access to endoscopy facilities after 4 h of continuous one-way travel. Barriers to endoscopy include lack of community awareness, insufficient referral systems, faulty equipment, scarcity of a trained workforce, and costs. **Conclusions:** Endoscopy capacity, timely access to facilities, and procedural volume is low. To mitigate barriers, Nigerian physicians recommend implementing awareness campaigns, increasing the volume of providers who are trained and certified in a standardized manner, and repairing endoscopes locally. These strategies are potential solutions to improve endoscopy capacity and early detection; however, their implementation and impact will need to be studied.

Keywords: Endoscopy capacity, gastrointestinal, mixed methods, needs assessment

Abstract 7

Spectrum of oesophagogastrroduodenoscopy findings in patients presenting with upper gastrointestinal bleeding in a tertiary hospital in Ilorin

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Background: Upper gastrointestinal bleeding (UGIB) is a common and potentially life-threatening condition. Oesophagogastrroduodenoscopy (OGD) is an invaluable tool in the investigation and management of UGIB. **Aim:** We studied the spectrum of endoscopy findings among patients who were referred for OGD on account of UGIB. **Methodology:** This was a cross-sectional study of patients who had OGD done at the University of Ilorin Teaching Hospital on account of UGIB from year 2010 to 2022. Endoscopies were performed as per the standard protocol with diagnosis based on accepted criteria. Data were retrieved from the endoscopy register, entered into a spreadsheet, and analyzed using the Statistical Package

for Social Sciences (SPSS) version 22. Categorical variables were compared using a Chi-square test and statistical significance set at $P < 0.05$. **Results:** A total of 1438 patients (mean age: 51.0 ± 16.4 years; age range, 10–100 years; 730 [50.8%] females) were included. Of these patients, 280 (19.5%) presented with UGIB. Peptic ulcers disease (PUD) 68 (24.3%) followed by gastritis 50 (17.9%), esophageal/gastric varices 42 (15.0%), gastroduodenitis 20 (7.1%) and gastric tumors 18 (6.4%) were the commonest causes of UGIB in the study population. Of the 68 cases of PUD, 43 were duodenal ulcers whereas 25 were gastric ulcers. The mean age of patients with UGIB was 51.0 ± 20.0 years and it was more common in males 187 (66.8%); $P < 0.05$. **Conclusion:** UGIB was more common in males and the most common cause of UGIB in our study population was PUD.

Keywords: Esophageal varices, gastric tumors, oesophagogastrroduodenoscopy, peptic ulcer

Abstract 8

Laparoscopic assisted low anterior resection: Report of 2 cases

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Background: Colorectal cancer incidence is increasing in our environment. Surgery is the mainstay of treatment in early cases. It is usually performed by open methods in most low-income countries. Laparoscopic approach is currently gaining ground. The aim of this is to report 2 cases of laparoscopic-assisted low anterior resection performed in two Centers. **Case Reports:** Two female patients aged 29 years and 56 years, respectively, presented with bleeding per rectum. Colonoscopy confirmed tumor at 7 cm and 6 cm from the anal verge and biopsy revealed well and moderately differentiated adenocarcinoma. Both had laparoscopic assisted low anterior resection and diverting ileostomy. The patients had free resection margins. They are currently on adjuvant chemotherapy and have been seen in outpatient clinic with good outcomes. **Conclusion:** Laparoscopic low anterior resection will benefit patients with low rectal cancer. It is a safe method and we found

this very useful in our Center as part of advanced gastrointestinal minimal access surgical procedures.

Keywords: Laparoscopic assisted, low anterior resection, rectal cancer

Abstract 9

Inflammatory bowel disease in adults—Experience and challenges in a gastroenterology practice in south-south Nigeria

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Background: Inflammatory bowel disease (IBD) is a chronic inflammatory disorder of the gastrointestinal tract that is reported to be rare in Africans. The objective of this study is to share the experience of our gastroenterology practice in Calabar, Cross River State on IBD. The age and sex distribution of the IBD patients, as well as the clinical presentation and management will also be described. **Methods:** This was a 10-year review of the records of patients visiting the gastroenterology clinic of the University of Calabar Teaching Hospital and two private gastroenterology clinics in Calabar Municipality. The diagnosis of IBD was made based on clinical, laboratory, endoscopic, and histological data obtained. **Results:** During the study period, data from 22 patients with suspected IBD were obtained based mostly on initial clinical and endoscopic evaluation. There were 16 males and 6 females, aged between 22 and 75 years with a median age of 46.5 years. However, 8 patients had features consistent with IBD. Six patients had ulcerative colitis whereas two had Crohn's disease. Seven patients had moderate disease with the main clinical features being recurrent mucoid bloody diarrhea. All the patients had treatments with either sulphasalazine or mesalazine as well as steroids and antibiotics with variable response. One patient had strictures requiring a colostomy. **Conclusion:** Although IBD is uncommon in Nigeria, a high index of suspicion is important, especially in patients presenting with the recurrent passage of

mucoid bloody stools. Hence, the role of colonoscopy and histology are invaluable in establishing the diagnosis.

Keywords: Adults, Crohn's disease, inflammatory bowel disease, ulcerative colitis

Abstract 10

A retrospective review of colonoscopy practice at the University of Abuja Teaching Hospital, Abuja

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Background: The colonoscopy procedure is an important semi-invasive tool in the diagnosis of colorectal diseases. It is also an important therapeutic procedure and screening tool for some colorectal disorders. **Aim:** To review the demographic data of patients, indications for colonoscopy and findings at colonoscopy among patients who had a colonoscopy at the University of Abuja Teaching Hospital (UATH). **Methodology:** This was a retrospective study of patients who had colonoscopy done at the UATH from May 2010 to April 2023. Data were obtained from the colonoscopy register at the endoscopy suite and were analyzed using SPSS version 25.0. **Results:** A total of 754 patients with age ranging from 16 to 90 years (mean 50.1± 13.9) underwent colonoscopy during the period. The majority were males (60.1%). The common indications for colonoscopy were hematochezia (28.5%), suspected colorectal malignancy (17.2%), suspected hemorrhoids (12.3%), chronic constipation (5.6%), suspected inflammatory bowel disease (5.0%), diarrhea (3.4%), and screening colonoscopy (2.4%). Boston Bowel Preparation Score was at least 6 in 86.3% of the patients. The caecal intubation was achieved in 78.2% of the patients. The common findings were hemorrhoids (46.7%), colonic/rectal polyps (13.5%), colonic/rectal cancers (12.6%), inflammatory bowel disease (6.5%), colitis (6.2%) and diverticulosis (4.9%). The findings were normal in 17.6% of the patients. No complication or adverse event was recorded in any of the patients. **Conclusion:** Colonoscopy is a safe diagnostic procedure. The commonest indication for colonoscopy in UATH was hematochezia whereas the commonest finding was hemorrhoids. The request for screening colonoscopy was low and should be encouraged.

Keywords: Endoscopy, Nigeria, screening colonoscopy