0350

Epidemiology of *Helicobacter pylori* and chronic atrophic gastritis: Population-based study among 880 Cameroonians

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Background: Atrophic gastritis (AG) is the single most powerful independent risk factor for gastric cancer (GC) which still remains a major public health problem worldwide. A comprehensive diagnosis of AG can now be achievedusing a non-invasive blood test with four stomach-specific biomarkers (pepsinogen-I and –II, amidated gastrin-17 and *Helicobacter pylori* IgG antibodies; GastroPanel®, BiohitOyj, Helsinki, Finland) without the need to perform histology. Epidemiological data on chronic AG from general population samples are scarce in Cameroon. We sought therefore to assess the prevalence of chronic AG and its potential risk factors in a population-based cohort.

Methods and materials: Blood samples were aseptically collected into EDTA blood tubes for the serological measurements of pepsinogen I and II, gastrin-17 and and*Helicobacter pylori* IgG antibodies. A questionnaire on socio demographic factors was administered

Results: A total of 880 participants were enrolled from March 2017 to May 2019, aged 20- 86years (mean ± SD 46.85 ± 14.44), including 390 males aged 22-84 years (mean ± SD 47.20 ± 13.77) and 490 females aged 20-86 years (mean ± SD 46.58 ± 14.96). The prevalence of AG according to two different cut-off values of PGI< 30 μg/l and PGI/PGII ratio<3.0 was 18.8% and 19.5%, respectively. The male gender was more closely associated with AG than female, with OR = 1.428, 95% CI 1.011-1.992 ($p = 0.046$). A strong association between *H. pylori* infection and AG was observed ($p = 0.0106$)

Conclusion: The results obtained from this cohort are alarming witha high prevalence of chronicAG (18.8%) and *H. pylori* infection (74.9%). Given that these two conditions represent the single most important risk factors of GC, it would be important to implement the GastroPanel® test to achieve cost savings and develop strategies for reducing the heavy disease burden from AG.

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0351

Bloodstream infections in solid tumour malignancy: Clinical outcomes and prognostic factors

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Background: Contradicting findings on the association of adequate antimicrobial therapy and improved clinical outcomes among the solid tumour malignancy patients with bloodstream infections (BSI) were reported, where inadequate antimicrobial therapy have been both associated and not associated with mortality. Thus, this study aimed to evaluate the association of adequate antimicrobial therapy with desirable clinical outcomes, and to determine the prognostic factors of mortality for solid tumour malignancy patients with BSI.

Methods and materials: Medical records of 130 randomly sampled adult patients with solid tumour malignancy at a national cancer centre of Malaysia, whom had bacteria growth in their blood culture between July 2017 and December 2018 were evaluated in this retrospective cross-sectional study.

Results: Gram-negative BSI occured in 71.5% of cases, mainly due to *Klebsiella pneumoniae* (21.5%), *Escherichia coli* (16.7%), and *Pseudomonas aeruginosa* (11.8%). 98.2% of BSI patients received empirical antimicrobial therapy while 58.5% received adequate empirical antibiotic coverage. There was no significant association between adequacy of empirical antibiotic coverage with length of hospital stay ($p = 0.149$), 48-hours all-cause mortality ($p = 0.255$), and 28-days all-cause mortality ($p = 0.676$). Albumin levels < 3.0 g/dL (Adj OR = 5.163; 95% CI = 1.388-19.210; $p = 0.014$) was an independent 48-hours all-cause prognostic factor of mortality and elevated CRP levels ≥184.4 mg/L (Adj OR = 5.923; 95% CI = 1.387-25.000; $p = 0.016$) was an independent 28-days all-cause prognostic factor of mortality for solid tumour malignancy patients with BSI.

Conclusion: We found that empirical treatment adequacy was not associated with length of hospital stay and mortality among solid tumour malignancy patients with BSI. Hypoalbuminaemia and CRP elevation may be used as prognostic indicators for mortality among the solid tumour malignancy patients with BSI and should be further evaluated with prospective studies of larger sample size.

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