



# The Galle Medical Journal

Journal of the Galle Medical Association

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## ABSTRACTS

### Oral and Poster Presentations

*at the*

**80<sup>th</sup> Annual Academic Sessions**

*of the*

**GALLE MEDICAL ASSOCIATION**

**15<sup>th</sup> & 16<sup>th</sup> September 2021**

*at the*

**Faculty of Medicine  
University of Ruhuna  
Galle, Sri Lanka**



# The Galle Medical Journal

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## Message from the Editors

It is our great pleasure to publish the abstracts of oral and poster presentations of the 80<sup>th</sup> Annual Academic Sessions of Galle Medical Association (GMA) 2021 with its theme “*Sustaining Healthcare Amidst Challenges*”

The Annual Academic Sessions is the most important event in the academic calendar of GMA and serves as a forum to bring together diverse specialties to address on common and up to date health related issues of Sri Lanka. Further it provides an opportunity to share the research work and experience of the scientists and health care professionals.

For the first time in the history of GMA, the Annual Academic Session was planned to be conducted through virtual platform. This year, despite the pandemic we received a reasonable number of abstracts from wider scientific community. Each paper was reviewed by two independent reviewers. It will be challenging for both organizers and presenters to adapt to the virtual platform overcoming the technical interruptions. This would be a novel experience to be gained and undoubtedly step us forward.

We would extend our sincere gratitude to the keynote speaker Professor M. D. Lamawansa, Vice Chancellor, University of Peradeniya and to all the speakers of plenary lectures and symposia of the academic sessions. We thank all the authors for contributing with research abstracts presented in the proceedings.

We wish you all the very best and a productive session.

***Sudheera Jayasinghe***

***Achala Liyanage***

***Co-Editors - Galle Medical Association***

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**Oral Presentation – 01****COVID-19 surveillance during the early stages of the pandemic in the Southern Province, Sri Lanka**

**Wijayaratne WMDGB<sup>1</sup>, Gunasena S<sup>1</sup>, Nagahawatte A de S<sup>1</sup>, Weerasinghe NP<sup>1</sup>, Tillekeratne LG<sup>2</sup>, Nicholson B<sup>3</sup>, Woods C<sup>2</sup>, Danthanarayana N<sup>4</sup>, Gunasekara N<sup>1</sup>, Dharmasiri GNJ<sup>1</sup>, Mahaliyanage DT<sup>1</sup>, Wickramasinghe SS<sup>1</sup>, Thabrew HHPMJ<sup>1</sup>, Piyasiri DLB<sup>4</sup>, Priyanthi D<sup>5</sup>, Lewkebandara R<sup>6</sup>, Ubeysekara HA<sup>4</sup>, Bodinayake CK<sup>1</sup>, Devasiri Iv<sup>1</sup>, Amarasena TSD<sup>1</sup>**

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<sup>6</sup>District General Hospital, Hambantota, Sri Lanka.

**Background**

Surveillance testing for COVID-19 infection helps to identify emerging clusters within the country. This study aims to assess the COVID-19 status in the Southern Province at the initial phase in 2020.

**Materials and methods**

A prospective observational study was conducted among patients attending the Outpatient Departments of the three main hospitals in the Southern Province. Demographic data, relevant clinical information and exposure to the disease were documented. A nasopharyngeal and oropharyngeal swab was collected and tested for COVID-19 using RT-PCR test kit (CDC).

**Results**

A total of 859 persons from Galle (44.8%), Matara (28.1%) and Hambantota (27.1%) Districts were tested from 19<sup>th</sup> June to 20<sup>th</sup> November 2020. The majority (89.8%, 736/820) was between 19-59 years and male (56.9%, 474/833).

Approximately one-third (29.4%, 253/859) of participants had at least one feature suggestive of influenza like illness (ILI). None of the surveyed participants had been previously positive for COVID-19, admitted to a COVID-19 ward, or quarantined in COVID-19 isolation camps. Potential exposure to COVID-19 was identified in 78 / 859 (9.1%). The denominator was not the total number of participants as some did not declare the information.

Only one person (1/859) was positive by COVID-19 RT-PCR testing, giving an overall prevalence of 0.04, positive rate of COVID-19, 0.39% in those having symptoms suggestive of ILI (1/253) and zero in the non-ILI group (0/606).

**Conclusion**

The prevalence of COVID-19 in the community of the Southern Province of Sri Lanka was low with no evidence of infection among the asymptomatic population during the latter half of year 2020.

## Oral Presentation – 02

# Notified incident cases of dengue and leptospirosis; time series analysis for two commonest vector-borne diseases in Sri Lanka

**Darshana ILAN<sup>1</sup>, Chamika RMA<sup>2</sup>**

<sup>1</sup>Department of Community Medicine, Faculty of Medicine, University of Ruhuna, Galle, Sri Lanka.

<sup>2</sup>Department of Nursing, Faculty of Allied Health Sciences, University of Peradeniya, Peradeniya, Sri Lanka.

## Background

Dengue and leptospirosis are considered as the two commonest vector borne diseases in Sri Lanka, which have high case fatality rate. This study was conducted to develop two separate models in order to forecast monthly notified incidence cases of dengue and leptospirosis in Sri Lanka.

## Materials and methods

A retrospective time series study was conducted using monthly notified incidence cases of dengue and leptospirosis from January 2010 to April 2021. Data were extracted from publicly available website of Epidemiology unit which were collected through routine disease surveillance system based on H 399. Time series analysis was performed using Minitab statistical software (19<sup>th</sup> version). Akaike Information Criteria (AIC) was used to select the best fitted models.

## Results

Data of monthly notified incident cases of dengue and leptospirosis were not stationary with respect to mean and variance while trend and seasonality were observed. There was no correlation between reported monthly incident cases of dengue and leptospirosis ( $r = -0.04$ ). Auto Regressive Integrated Moving Average (ARIMA) (3,1,2) (0,1,1)<sub>12</sub> model was identified as the best model for dengue (AIC = 137.3) while ARIMA (1,1,1) (0,1,1)<sub>12</sub> model was identified as the best model for leptospirosis (AIC = 129.4). The forecast for one year (May 2021 to April 2022), revealed that a seasonal peak in dengue incident cases (7400 cases) will be expected in July while for leptospirosis (1349 cases) in November.

## Conclusion

The identified two models can be used to forecast of incident cases and impending outbreaks for dengue and leptospirosis respectively. It will be helpful for the healthcare planners of the country for implementing preventive and curative measures for these two deadly diseases.

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**Oral Presentation – 03****Evaluation of a staining technique using toluidine blue in comparison to Gram stain for direct detection of bacteria in the positive blood culture broth****Kumara YNB<sup>1</sup>, Wickramasinghe SS<sup>2</sup>, Peiris HH<sup>1</sup>**<sup>1</sup>*Department of Medical Laboratory Science, Faculty of Allied Health Sciences, University of Ruhuna, Galle, Sri Lanka.*<sup>2</sup>*Department of Microbiology, Faculty of Medicine, University of Ruhuna, Galle, Sri Lanka.***Background**

Direct Gram stain (GS) smear of positive blood culture broth remains the cornerstone of rapid identification of the causative microorganism and determining the empirical antibiotic treatment in septicaemia. There is no other staining method available equivalent to Gram stain. The objective of the study was to evaluate the accuracy of a staining technique using toluidine blue (TB) in comparison to Gram stain for the direct detection of bacteria according to their morphology in the positive blood culture broth.

**Materials and methods**

A diagnostic cross-sectional study was performed using 155 positive blood culture broths collected from the Microbiology Laboratory in Teaching Hospital, Karapitiya. Direct smears were stained with GS and TB, and GS of culture isolates were considered as the gold standard. Validity of tests were assessed with 95% confidence interval.

**Results**

Out of 155, 67.1%, 18.7%, 6.5% and 7.7% organisms were identified as cocci, bacilli, coccobacilli, and yeasts, respectively. Sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) of GS and TB stains were close to 100% for detection of cocci. When identifying bacilli, the sensitivity of both GS (75.9% ; 60.3% - 91.4%) and TB (79.3% ; 64.6% - 94.1%) was low, but PPV of TB stain (95.8% ; 87.8 - 100.0%) was higher than GS (88.0% ; 75.3 - 100.0). Sensitivity, specificity, PPV and NPV were higher in TB than GS for the identification of coccobacilli. Yeasts were precisely identified (100%) by both GS and TB. Overall, TB smears were clearer as there was minimal background staining.

**Conclusion**

TB stain is useful for identifying bacteria and yeasts according to their morphology in positive blood culture broths as an accurate, rapid and cost-effective technique.

## Oral Presentation – 04

# Prevalence of pain among institutionalized older adults in Galle district; a descriptive study

**Abeysekera NWBY<sup>1</sup>, De Zoysa GED<sup>2</sup>**

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<sup>2</sup>*Faculty of Medicine, University of Ruhuna, Galle, Sri Lanka.*

## Background

Pain is a common condition which is an unpleasant sense of discomfort that persists or progresses over a long period of time. It negatively impacts the lives of elders physically or psychologically. Sri Lanka has a higher proportion of older adult population in South Asia and the institutionalized older adult population has risen considerably. Objective of this study was to assess the prevalence of pain in institutionalized older adults in the Galle District.

## Materials and methods

A descriptive cross-sectional study was conducted in 20 elderly homes in Galle District and 310 elders participated. Data was collected by using an interviewer administered questionnaire and validated Sinhala version of Pain Catastrophising Scale (PCS) to assess physical and psychological pain. Data were analysed using SPSS version 25.0 for windows ( $p < 0.05$ ).

## Results

In this sample majority (65%) were females with a mean age of 74.58 years. From the study subjects 78.7% had any kind of pain and 62.3% had chronic physical pain. Sixty percent (60%) had pain in more than one site and 52.3% got treatment for pain. According to PCS, 91.9% of subjects had catastrophising pain (CP). Moderate and severe CP was observed in 12.9% and 16.1% respectively and all of them suffered from chronic CP. Subscales of the PCS revealed that, from the total subjects 77.7% had helplessness, 82.9% had magnification and 83.9% had rumination.

## Conclusion

Prevalence of both physical and psychological pain is high among institutionalized older adults in this study sample and early detection and intervention will help to improve the quality of life.



## Oral Presentation – 05

**Incidence of anthracycline induced cardiotoxicity in breast cancer patients admitted to Teaching Hospital Karapitiya**

**Sandamali JAN<sup>1</sup>, Hewawasam RP<sup>2</sup>, Fernando MACSS<sup>3</sup>, Jayatilaka KAPW<sup>2</sup>, Madurawe RD<sup>4</sup>, Sathanandan PP<sup>4</sup>, Ekanayaka U<sup>4</sup>, Horadugoda J<sup>4</sup>**

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**Background**

Anthracycline chemotherapeutics are commonly associated with cardiotoxicity which compromise the quality of life of cancer survivors. Objective of this study was to determine the incidence of anthracycline induced acute and early onset chronic progressive cardiotoxicity in cancer patients admitted to the oncology unit, Teaching Hospital Karapitiya.

**Materials and methods**

A prospective cohort study was performed on 196 breast cancer patients on anthracycline chemotherapy. Patients who were diagnosed with any structural heart disease or cardiomyopathy and patients who developed any acute non cardiac complications were excluded from the study. Demographic details, risk factors, hormone receptor status were documented. Cardiotoxicity was evaluated by echocardiography, estimation of cardiac troponin I (cTnI) and N-terminal pro-brain natriuretic peptide (NT-pro BNP) concentrations at; baseline, one day after first and last dose and six months after completion of anthracycline chemotherapy. Sub-clinical cardiac dysfunction was identified as fall of left ventricular ejection fraction >10% from baseline.

**Results**

Sub-clinical cardiotoxicity was developed in 33.16% six months after completion of anthracycline chemotherapy according to echocardiography. NT-proBNP was elevated one day after the last dose in 31.12% and six months after completion of chemotherapy in 46.43%. cTnI concentration was elevated one day after the first dose in 32.65% but none of them had a significant elevation which indicates myocardial necrosis. However, 10.20% and 41.33% patients had cTnI  $\geq$  0.04 ng/ mL one day after the last dose and six months after completion of chemotherapy respectively. Univariate and multivariate analysis revealed cumulative dose (>350 mg/m<sup>2</sup>) of anthracycline as the most significantly associated risk factor (OR = 7.28, 12.41,  $p < 0.001$ ) among others for the occurrence of sub-clinical cardiotoxicity.

**Conclusion**

Although acute cardiotoxicity was not observed in these patients, incidence of early onset chronic progressive cardiotoxicity was significantly high.

**Oral Presentation – 06**

**Cardiac rhythm abnormalities among patients underwent total cavopulmonary connection completion**

**Sooriyasena JAGP, Pflaumer A, Jones B**

*The Royal Children's Hospital, Melbourne, Australia.*

**Background**

Total cavopulmonary connection (TCPC) completion achieves palliation in patients with physiologic univentricular hearts that are not amenable to repair. Arrhythmia is a troublesome postoperative complication, though the incidence, risk factors and outcome have not been well defined. This study aims to describe cardiac rhythm abnormalities, possible predicting factors and outcomes in patients undergoing TCPC completion.

**Materials and methods**

A retrospective longitudinal study was conducted on a cohort of 102 patients who underwent Fontan completion at the Royal Children's Hospital, Melbourne, from 2015 to 2020. Data were collected from hospital records using a data extraction form and analysed together with documented cardiac rhythms whenever an arrhythmia occurred. Frequencies were generated by cross-tabulations to generate descriptive statistics and analysed with Chi-square distribution and t-tests.

**Results**

Of the 102 patients considered, 65 (63.7%) were male. Mean age at surgery was 6.27 years. Of them 26 (25.50%) developed arrhythmias during the post-operative period. Tachy-arrhythmias were commoner than brady-arrhythmias. Supraventricular tachycardia was the commonest (38.46%) type of arrhythmia. Those who developed arrhythmia had significantly longer cardiopulmonary bypass duration ( $p = 0.04$ ) and cross-clamp duration ( $p = 0.04$ ) compared to those without arrhythmia. Pre-operative atrial pressure ( $p = 0.299$ ) or pulmonary artery pressure ( $p = 0.091$ ) were not predictive of arrhythmias. The death rate of the patients who developed arrhythmias was 7.69% ( $p = 0.001$ ), whereas in others it was 1.35%.

**Conclusion**

Longer cardiopulmonary bypass and cross-clamp durations predict high arrhythmia burden following TCPC completion. Post-operative arrhythmias are associated with high post-procedure mortality.

## Oral Presentation – 07

**A comparison of the outcomes of management in dengue haemorrhagic fever using minimal intervention and the standard management protocol in paediatric units of Teaching Hospital Karapitiya****Kaushalya PGC<sup>1</sup>, Liyanarachchi ND<sup>1</sup>, Wijesinghe CJ<sup>2</sup>, Lakpriya RGS<sup>1</sup>, Wimalasena TBGH<sup>3</sup>**<sup>1</sup>*Teaching Hospital Karapitiya, Galle, Sri Lanka.*<sup>2</sup>*Department of Community Medicine, Faculty of Medicine, University of Ruhuna, Galle, Sri Lanka.*<sup>3</sup>*University of Colombo, Colombo, Sri Lanka.***Background**

Dengue is a major health concern in Sri Lanka. Dengue haemorrhagic fever (DHF) is managed following a standard protocol (SP) laid down by Ministry of Health. Due to various reasons a deviation from SP was observed with minimal intervention (MI) i.e. without intravenous fluids and urinary catheterisation during the last epidemic of DHF. This study was aimed to compare the outcomes of MI vs SP in terms of the development of complications and outcomes of DHF.

**Materials and methods**

In a comparative cross-sectional study, the clinical records of pediatric patients with DHF admitted to Teaching Hospital, Karapitiya during 2019 (n = 156) were reviewed retrospectively. The patients who have been managed according to SP and who underwent MI were identified based on clinical records. Data on relevant study variables were extracted from the clinical records of the two groups of patients and compared using t test and Mann Whitney U test.

**Results**

Of 156 patients with DHF, 98 patients (65%) were managed following SP while 53 (35%) patients with MI. At the end of critical phase 98 patients remained in SP group while 25(16%) patients were in MI group.

The two groups were comparable with respect to age ( $p = 0.57$ ), sex ( $p = 0.72$ ), the day of fever on admission ( $p = 0.65$ ) and haematological parameters (WBC, PCV and platelet count) on admission ( $p > 0.05$ ). In contrast, liver enzymes ( $p < 0.004$ ), and haematocrit, ( $p < 0.009$ ), during the course of the disease and percentage of fluid quota ( $p < 0.001$ ) given to patients were high in SP group.

There was no significant difference in the final outcome of patients in terms of deaths and duration of hospital stay in the two groups. However, infections ( $p < 0.04$ ) and fluid overload ( $p < 0.004$ ) were common in SP group compared to MI group and the difference was statistically significant.

**Conclusion**

MI appears to reduce complications of the management of DHF, while showing similar outcomes as the SP. As MI is patient friendly and reduces the burden to health care system, further prospective studies are suggested to make recommendations on its use.

Oral Presentation – 08

**Trends in clinico-pathological profile of thyroid cancers diagnosed over a period of 19 years at a single histopathology unit**

**Liyanage TG<sup>1</sup>, Mudduwa LKB<sup>1</sup>, Mudduwa YDB<sup>2</sup>, Abey Siriwardhena DS<sup>1</sup>, Liyanage AUG<sup>3</sup>**

<sup>1</sup>Department of Pathology, Faculty of Medicine, University of Ruhuna, Galle, Sri Lanka.

<sup>2</sup>National Hospital of Sri Lanka, Colombo, Sri Lanka.

<sup>3</sup>Teaching Hospital Mahamodara, Galle, Sri Lanka.

**Background**

The latest cancer incidence data available for 2015 reveal that thyroid cancer (TC) is the second most common cancer among females and the commonest cancer among females aged 15-34 years in Sri Lanka. The age-specific incidence rate of TC has doubled from 7.4-15.9/100,000 population, in females from 2010-2015. Galle is one of the 4 districts with the highest crude incidence rate of TC in 2015. The objective of the study was to describe the trends in clinico-pathological profile of TCs reported at a Histopathology Unit in Galle over five years from 2016.

**Materials and methods**

A descriptive, cross-sectional study was done and all thyroid specimens reported at our unit from 2002-2015; cohort-1(C1) and from 2016-2020; cohort-2(C2) were included. Clinicopathological features, age, gender, clinical presentation, histological diagnosis of C1 and C2 were extracted from laboratory worksheets and compared.

**Results**

There were 3015 thyroid specimens (C1-1735, C2-1280) included. There was a significant increase in TCs reported ( $p < 0.000$ ); C1-266 (15.33%,  $n = 1735$ ) and C2-279 (21.79%,  $n = 1280$ ) with a decrease in the percentage of males affected ( $p = 0.002$ ); C1-13.5% (35/266) and C2-7% (17/279). Papillary microcarcinoma (<1 cm) has increased significantly ( $p < 0.000$ ); C1-2.82% (49/1735) and C2-8.59% (110/1280). Proportions of papillary carcinomas of  $\geq 1$  cm, follicular carcinoma and other TCs, age and stage at presentation and association with autoimmune thyroiditis (AT) have not changed ( $p < 0.05$ ). Clinical presentation has changed with an increase in cancers presenting as solitary nodules and diffuse goiters (DG) ( $p = 0.01$ ) and increase in the severity of associated AT ( $p < 0.000$ ).

**Conclusion**

There is an upward trend in the number of thyroid specimens received for histopathology and the percentage of TCs and microcarcinomas diagnosed. The clinical presentation of TCs also showed an upturn in presenting as DGs and increase in the severity of background AT over the 19 years.

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**Oral Presentation – 09****Assessment of advanced ECG knowledge among postgraduate trainees in emergency and general medicine in Sri Lanka****Gunawardana MABM<sup>1</sup>, Lanerolle MI<sup>2</sup>, Silva SN<sup>3</sup>**<sup>1</sup>*District Hospital, Matara, Sri Lanka.*<sup>2</sup>*The National Hospital of Sri Lanka, Colombo, Sri Lanka.*<sup>3</sup>*Ochre Medical Centre, Deniliquin, Australia.***Background**

A thorough knowledge on interpreting ECGs is essential for doctors working in emergency treatment units, as they are the first physicians who encounter acutely ill patients in Sri Lanka. However, ECG education is mostly provided as on the job training. Therefore, it is important to assess the ECG knowledge of these postgraduate trainees in emergency and general medicine, and the factors related to it. This study assesses the knowledge of advanced ECG interpretation among postgraduate trainees in emergency and general medicine in Sri Lanka.

**Materials and methods**

A descriptive cross-sectional study was done among 200 postgraduate trainees of the Postgraduate Institute of Medicine, University of Colombo, mainly from the fields of emergency medicine and general medicine. An online self-administered questionnaire assessing knowledge of ECG characteristics, morphology and clinical applications was distributed. Collected data was analyzed using descriptive and analytical statistics using *SPSS* software.

**Results**

Out of the 188 valid respondents, 72% were emergency medicine trainees. Brugada syndrome 181 (96.2%), hyperkalemia 172 (91.5%) and long QT syndrome (89.8%) were the most accurately diagnosed conditions among the ECG conditions tested. The least accurately diagnosed conditions were, pericarditis 36 (19.1%), ischaemic changes on LBBB per Sgarbossa criteria 92 (48.9%). Whilst the majority were competent in recognizing the characteristics to diagnose ECG conditions, the lowest skills were in identifying ECG morphologies and clinical correlations.

**Conclusions**

There were deficiencies in identifying pericarditis and Sgarbossa criteria on ECGs. Also they were weak in identifying ECG morphologies and clinically correlating them.

## Oral Presentation – 10

# Effect of alendronate and vitamin D<sub>3</sub> treatment on bone turnover markers in postmenopausal women with high fracture risk: A double-blind, randomised controlled trial

**Rathnayake H<sup>1</sup>, Lekamwasam S<sup>2</sup>, Wickramatilake CM<sup>1</sup>, Lenora J<sup>3</sup>**

<sup>1</sup>Department of Biochemistry, <sup>2</sup>Department of Medicine, <sup>3</sup>Department of Physiology, Faculty of Medicine, University of Ruhuna, Galle, Sri Lanka.

## Background

Bone turnover markers (BTMs) are increased after menopause in women. BTMs are expected to decrease significantly after receiving anti-resorptive treatment in osteoporosis and they can be used to monitor the efficacy of the treatment. This study evaluated the changes of BTMs following alendronate (ALN) and vitamin D<sub>3</sub> (VitD<sub>3</sub>) treatment in postmenopausal women (PMW) with high fracture risk (HFR).

## Materials and methods

PMW with HFR were recruited from Bope-Poddala MOH area and randomly assigned into the treatment (n = 30) and control (n = 30) groups. Treatment group received oral ALN (70 mg/week) with oral VitD<sub>3</sub> (1000 IU/day). Control group received VitD<sub>3</sub> (1000 IU/day) along with a matching placebo. Serum cross linked C-telopeptide of type I collagen (CTX; bone resorption marker) and procollagen type I N-propeptide (PINP; bone formation marker) were measured at baseline and after six months, using ELISA. BTMs levels before and after treatment were compared by paired t-test.

## Results

In the treatment group, mean CTX and PINP levels at baseline were 3.12 ng/mL and 262 pg/mL respectively while respective mean values for the control group were 2.66 ng/mL and 409 pg/mL. After six months, mean CTX and PINP levels in the treatment group were 1.24 ng/mL and 159 pg/mL respectively while in the control group, the respective mean values were 3.01 ng/mL and 412 pg/mL. In the treatment group, CTX and PINP levels were significantly decreased by 60% ( $p < 0.001$ ) and 39% ( $p = 0.005$ ) respectively after six months compared to the baseline levels. Significant differences were not observed in the control group for mean CTX ( $p = 0.43$ ) and PINP ( $p = 0.97$ ) after six months compared to baseline. Mean differences between treatment and control groups were not significant for CTX ( $p = 0.36$ ) and PINP ( $p = 0.06$ ).

## Conclusion

Combination of alendronate and vitamin D<sub>3</sub> treatment significantly reduced bone turnover markers compared to vitamin D<sub>3</sub> alone.

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**Oral Presentation – 11****Seroprevalence of COVID-19 among high-risk population in Galle, Sri Lanka - A story behind successful control of the first wave of the COVID-19 pandemic****Palangasinghe DR<sup>1</sup>, De Zoysa PDWD<sup>1</sup>, Dahanayaka NJ<sup>1</sup>, Herath HMM<sup>1</sup>, De Silva PV<sup>2</sup>**

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**Background**

Sri Lanka was considered as one of the countries successful in the control of COVID-19 pandemic during the first wave. The prevalence of the disease among high-risk groups would provide us an idea about the effectiveness of control measures undertaken during the first wave. Positive SARS-CoV-2 antibodies would assist in diagnosing undetected COVID-19 infections in the community. This study was carried out to determine the seroprevalence of COVID-19 among tourism industry workers in Galle, Sri Lanka.

**Materials and methods**

A descriptive cross-sectional study was conducted among 100 tourism industry workers. They all had close contact with foreign tourists within six feet for a total of 15 minutes or more while they provided services to them during the three months starting from 1<sup>st</sup> of January, 2020. Antibody detection was performed using the New Coronavirus IgG/ IgM Rapid Test Kit which has a sensitivity of 98.89% and specificity of 97.78%.

**Results**

All the participants recruited for the study were tested negative for IgM and IgG antibodies against SARS-CoV-2. Among the 81 individuals who consented, a PCR test for SARS-CoV-2 was performed and all were negative. Both the antibody testing and PCR were performed on the same day.

**Conclusion**

The negativity of both PCR and antibodies among this study population provided strong evidence for the success of the control measures adopted during the first wave of the COVID-19 pandemic. How sustainable these measures have been during repeated waves of the infection in a lower-middle income country like Sri Lanka remains a question considering the economic impact of them.

## Oral Presentation – 12

# Clinical profile of patients with cerebrovascular accidents admitted to the emergency treatment unit at Teaching Hospital Karapitiya

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## Background

The study aimed to determine the clinical profile of the cerebrovascular accidents (CVA) patients admitted to emergency treatment unit (ETU), Teaching Hospital Karapitiya (THK)..

## Materials and methods

Consecutive consented adult patients with first-ever CVA referred to ETU, THK from the first three months of 2020 were eligible for this prospective observational study.

## Results

There were 58 patients (mean age  $56.1 \pm 13.1$  years). 35 (60.3%) were male patients (mean age  $66.0 \pm 11$ ) and 23 (39.7%) female patients (mean age  $64.7 \pm 14$ ). The majority had a previous medical history (63.5%) - hypertension 41%, diabetes mellitus 21%, dyslipidaemia 8%, asthma 5.2%. 17% of them had 3 or more chronic diseases. 51.7% had a family history of CVA. The weakness 27.6%, headache 24.1% were the most prevalent initial symptoms. The mean clinical parameters on admissions were SBP  $168 + 37.9$  mmHg, DBP  $97 + 21.3$  mmHg, pulse rate  $82.5 + 20.6$ , respiratory rate  $19 + 3.6$ , SpO<sub>2</sub>  $98 + 51.7$  51.7% had Spontaneous, non-traumatic intracranial haemorrhage (SICH). The initial clinical parameters were not significantly different between the gender or the CVA type. The NIH Stroke Scale score was  $11 + 10$ .

## Conclusions

High Prevalence of SICH and non-communicable chronic diseases were observed among the patients with CVA admitted to ETU, THK.



**Poser Presentation – 01****Prevalence of SARS-CoV-2 infection among Ruhuna medical undergraduates during the first two waves of COVID-19 pandemic in Sri Lanka**

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**Background**

Medical undergraduates are a vulnerable group for severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) infection. Therefore, we aimed to estimate the prevalence of SARS-CoV-2 infection among medical undergraduates during the first two waves of COVID-19 pandemic.

**Materials and methods**

A repeated cross-sectional study involved a convenience sample of medical undergraduates of Ruhuna University during September-November 2020 and January-February 2021. Nasopharyngeal swabs and serum samples were collected for RT-PCR and SARS-CoV-2 antibodies by ELISA.

**Results**

Of 279 serum samples, 175 (62.7%) were from students returned to university following the first wave, 104 were collected during the second wave of the pandemic. Median age of both groups was 25 years (IQR 24-27). In the first group SARS-CoV-2 antibodies were detected in one sample (0.5%) and none became PCR positive. During the second wave, 5 (4.8%) were PCR positive and antibodies were detected in 7 (6.7%). Asymptomatic infection rate was 87.5% (7/8). One fifth of each category were residents of Galle district. Majority did not record a recent febrile illness. Quarantining was recorded only during the second wave (31.7%). Over 95% in both groups did not report contact with overseas-returnees or security personnel. Contact with healthcare staff identified as 32.6% vs 63.5%. Contact with a confirmed COVID-19 case, suspected patient or an identified contact was 34.3%, 14.4% and 13.5% during the second wave. That of the first group was negligible.

**Conclusions**

During the second wave more Ruhuna medical graduates became positive for SARS-CoV-2 ( $p = 0.0014$ ) compared to that of the first wave. Surveillance at regular intervals, targeting individuals from diverse geographic regions, can be helpful in tracking the spread of SARS-CoV-2 in Sri Lanka.

Poser Presentation – 02

**The knowledge, practices, and associated factors related to COVID-19 infection, among doctors and nurses work in emergency treatment units in selected state hospitals in Kalutara district, Sri Lanka**

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**Background**

COVID -19 is one of the most contagious diseases in human history. Total number of COVID-19 cases are increasing globally and locally, hence health care worker (HCW) are at a high risk of getting infected.

**Materials and methods**

A descriptive cross-sectional study was conducted in March 2021, at four main emergency treatment units (ETU) in Kalutara district, Sri Lanka. The study population consisted of doctors and nurses who work in above ETUs. Data was collected using a self-administered printed questionnaire.

**Results**

Out of 220 individuals the majority was female (74.1%), and 58.6 % was nursing officers. The total knowledge on COVID 19 infection among participants which was assessed by a 70-mark scale ranged from 18 to 63. Social media was the most commonly used source of knowledge (86.8%). There was a statistically significant relationship between the knowledge and the designation ( $F = 3.70 ; p < 0.01$ ), the current working station ( $F = 6.47 ; p < 0.01$ ), work experience ( $F = 3.65 ; p < 0.01$ ) and training on infection control and prevention (IPC) ( $F = 7.98 ; p < 0.01$ ). proper donning (5%) and doffing (8.6%) practices were poor among participants while good practices were evident in hand hygiene practices (83.2%), appropriate discarding of used PPEs (74.1 %), and wearing a new face mask daily (84.5%).

**Conclusions**

The knowledge on COVID 19 among doctors and nurses varies according to their designation, working experience, working station and training on IPC. The practices are satisfactory except for donning, doffing, and PPE usage. There are areas that need to be improved on IPC practices in order to COVID-19 infection among HCWS in ETUs.

**Poser Presentation – 03****Effect of COVID-19 pandemic situation on congenital hypothyroidism screening performances in Faculty of Medicine, Galle****Liyanage D, Hettiarachchi M***Nuclear Medicine Unit, Faculty of Medicine, University of Ruhuna, Galle, Sri Lanka.***Background**

COVID-19 pandemic has created drastic consequences on healthcare services including preventive care services in Sri Lanka. This study is aimed to assess the impact of the pandemic on detection of congenital hypothyroid (CH) babies through the newborn screening (NBS) program in Sri Lanka.

**Materials and methods**

The key performance indexes (KPI) of NBS, including the number of days taken to receive a sample, issuing the report following analysis, and confirming the true positives during the first quarter of year 2020 (before lockdown), were compared with the remainder of the year

**Results**

There were 158,334 samples received and screened in 2020. Out of 208 screening positives (nTSH > 15 mIU/ml), 111 babies were confirmed as having CH. Out of confirmed positive babies, 17 samples were received prior to the lockdown in March. It took a median (IQR) of 7 (3 to 11) days to receive those samples and reported to the relevant parent / medical officer with a median of 4 (IQR 2 to 5) days. However, the rest (n = 94) were received with a median of 13 (IQR 7 to 20) days after birth. The laboratory took median of 60 (IQR 7 to 100) days to report due to non-availability of reagents. Subsequently, it took another median of 24 (IQR 2 to 64) days to get the serum confirmation.

**Conclusion**

Delayed delivery, lack of reagents due to logistic issues, delay in conveying results adversely affected the well-established process. Further, the lack of experiences in handling a pandemic situation and factors beyond the control of the healthcare team may have serious repercussions on the delayed initiation of treatment on CH.

Poser Presentation – 04

**Prevalence of anastomotic leakage among patients who underwent intracorporeal and extracorporeal anastomosis in laparoscopic right hemicolectomy in Diana Princess of Wales Hospital in United Kingdom and National Hospital of Sri Lanka**

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**Background**

Anastomotic leak after ileocolic anastomosis affects both the post-surgical improvement and mortality of a patient. Therefore, protection of ileocolic anastomosis is of paramount importance in laparoscopic right hemicolectomy. We aimed to assess the prevalence of anastomotic leakage among post-operative patients who underwent intracorporeal and extracorporeal anastomosis in laparoscopic right hemicolectomy.

**Materials and methods**

A descriptive cross-sectional study done among 89 patients with colorectal cancers who underwent laparoscopic right hemicolectomy. The study subjects were selected from the colo-rectal cancer registry of the hospital using a simple random sampling method. Both groups were operated and managed similarly. A number of 45 patients had intracorporeal and 44 patients had extracorporeal anastomosis respectively. They were observed for any anastomotic leakage in one-week duration. The data was collected from the bed head tickets and associated factors for the integrity of the anastomoses were determined by multivariate analysis.

**Results**

Mean age of the patients were 55 years. There were 45 males (50.56%) and 44 (49.44%) females. All the patients belonged to the American Society of Anaesthesiologists class 1 or 2. Out of 45 patients who had intracorporeal anastomosis, only one (2.22%) patient developed anastomotic leakage. Five patients (11.36%) who had extracorporeal anastomosis (n = 44) observed for anastomotic leaks. The prevalence of anastomotic leakage was 6.74% (95% CI : 5.30 - 8.18). Intracorporeal anastomosis has shown statistical significance in minimising ileocolic anastomotic leak ( $p < 0.01$ ) in multivariate analysis (AOR = 0.4 ; 95% CI : 0.31 - 0.6).

**Conclusion**

Intracorporeal ileocolic anastomosis has minimised the anastomotic leak when compared to extracorporeal anastomosis in laparoscopic right haemicolectomy