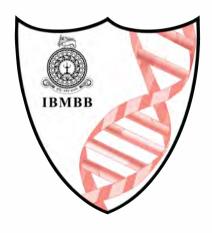*"Beyond the Blueprint of Life"*

FOURTH INTERNATIONAL CONFERENCE ON
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PP 09:

Relationship Between Body Mass Index and the Development of Pregnancy Induced Hypertension

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Hypertensive disorder of Pregnancy is a major cause of maternal and perinatal morbidity and mortality. While several risk factors for pregnancy induced hypertension (PIH) have been identified, Body Mass Index (BMI) has emerged as a significant, modifiable risk factor. This study aimed to evaluate the relationship between different ranges of BMI and the risk of developing pregnancy-induced hypertension.A prospective study was carried out in 68 pregnant women, [34 with normal blood pressure (120/80 mmHg; Group I) and 34 with PIH (140/90 mmHg and without proteinuria, Group II]. The BMI of the participants was determined using their pre-pregnancy weight and height. BMI was categorized as underweight (<18.5 kg/m^2), normal (18.5-24.9 kg/m^2), overweight (25.0-29.9 kg/m^2), obese (30.0-39.9 kg/m^2) and extreme obese (>40.0 kg/m^2). Independent sample t-test and Pearson correlation were employed to compare these parameters.Group I had 6 underweight, 17 normal, 9 overweight, and 2 obese women. Group II had 1 underweight, 8 normal, 17 overweight, and 8 obese women. Among the Group I women, majority (17nos) had normal BMI, with the mean of 21.94 ($\pm$2.10) kg/m². In Group II women, majority (17nos) were overweight with the mean of 26.88 ($\pm$1.05) kg/m². The mean BMI of Group I and Group II women of different categories of BMI showed a statistically significant difference [underweight p<0.001, normal, p=0.036, overweight p=0.008 and obesity=0.013]. In addition, Group I and Group II women showed a significant correlation between BMI and systolic (Group I; r=0.225, p=0.040, Group II; r=0.894, p=0.018) and diastolic (Group I; r=0.664, p=0.028, Group II; r=0.716, p=0.020) blood pressure. Higher BMI showed strong association with an increased risk of PIH. These findings underscore the importance of monitoring and managing BMI before and during pregnancy to mitigate the risk of PIH and improve maternal health outcomes.

Keywords: Body Mass Index, Pregnancy-Induced Hypertension, Pregnant women, Relationship

PP 10:

Investigating the correlation between Interleukin-1 beta and lumbar spinal stenosis in patients diagnosed for lumbar disc herniation undergoing lumbar microdiscectomy

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Lumbar spinal stenosis (LSS) refers to anatomical narrowing of the lower region of the spinal canal. LSS leads to compression of nerve roots and contributes to neural ischemia and impaired nerve conduction. Lumbar disc herniation (LDH) attributes to LSS and contribute to low back pain. This study was aimed to assess the correlation between serum levels of inflammatory marker IL-1β and LSS and also focused on determining the percentage of subjects presented with cauda equina compression among affected LSS subjects. All subjects have undergone lumbar microdiscectomy in selected hospitals of Sri Lanka. A cross-sectional study was carried out in the subjects diagnosed (n =40), for LDH with Magnetic Resonance Imaging (MRI) where the presence of LSS and compression of cauda equina were recorded using MRI interpretation. Serum IL-1β was measured using enzyme linked immunosorbent assay (ELISA). The relationship between IL-1β with the presence of LSS was assessed through the Spearman correlation test using Python 3.10. Results revealed that 25 out of 40 subjects were diagnosed for LSS. Further, 56% of subjects reported with LSS also interpreted for the compression of cauda equina. A statistically significant positive correlation was identified between the presence of LSS and IL-1β levels (Spearman's correlation coefficient, r=0.375, p=0.017). This study confirms the importance of IL-1β in LSS subjects with LDH suggesting the utilization of IL-1β as an assessment marker in patients who are at high risk in developing severe spine complications in the context of LDH. In addition, a moderate number of subjects (56%) with LSS had compression of cauda equina, emphasizing the necessity of enhanced treatment plans in order to avoid progression of neurological deficits.

Keywords: Lumbar spinal stenosis, IL-1beta, cauda equina