Can Hospital Days Be Reduced In Abnormal Uterine Bleeding Elective Surgeries Among Middle Aged Women?

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Introduction:
The Elective Gynaecological Surgery has been prevailing at 58% in India1.The Abnormal Uterine Bleeding(AUB),Postmenopausal Bleeding(PMB) are frequently diagnosed. The challenge is minimum hospital days with early recovery. Though the general belief is maximum of 5 hospital days, it extends upto 8 to 23 days. Presurgery waiting time have not been much dealt in many literatures. This study aims at identifying few biomarkers for each class of diagnosis.

Objective:
To identify the biomarkers, minimizing the presurgery hospital days.

Methods:
This is an evidence based retrospective study covering over 7 months during 2021. 8 Clinical laboratory measurable parameters and 12 Categorical Parameters were collected on simple urine and blood test. The sample size (n=63) was selected statistically at random out of 250 patients, excluding cases of malignancy and emergency. Linear discriminant function was developed for 8 measurable variables and multiple correspondence analysis was carried out for categorical variables to identify biomarkers.

Results:
50.8% were dignosed with AUB followed by 15.9% PMB and all Others at 33.3%. The stratification revealed presurgery mean waiting time was 4.3 +/_ 3.5 days for AUB, 2.3+/_ 1.6 days for PMB and 3.3+/_ 2.2 days for Others. The total turn around time was 7-10days for AUB, 5-10 days for PMB and 7-11 days for others. It is necessary to screen and ensure the absence of 4 categorical urine parameters (urine glucose, protein, ketone, Crystal)out of 40 levels of 12 parameters. The discriminant score of biomarkers identified Fasting Blood Sugar (FBS), urine pH and urine pus cells achieving an accuracy of 80% for each class of diagnosis. The nomogram prognosticates the presurgery waiting time as under,
 In AUB, if FBS less than 160 mg/dl and urine pH of around 6, the mean waiting time was 7days, but increased to 10 days if FBS and urine pH recorded more than 260mg/dl and 7 respectively.
In PMB if FBS maintained at 160mg/dl and urine pH 5.75-6.75, the mean waiting time was 1 to 2 days, but raised to 7 days if FBS and urine pH more than 260mg/dl and more than 7 respectively.
Similarly in others , mean waiting time was less than 2 days if FBS at 120mg/dl and urine pH of 5 -5.5; and more than 6days if FBS more than 260mg/dl and urine pH more than 7-7.5.

Discussion:
Naim M.Maalouf "Low urine pH A novel feature of Metabolic Syndrome" – Clinical Journal of American Society of Nephrology Sep2007, points out relationship between metabolic syndrome and low urine pH independent of age and renal function. The nomogram developed in this study also identifies the biomarkers FBS and urine pH which explains Insulin Resistance.

Conclusion:
FBS and Urine pH have to be screened along with other urine ketone, glucose, protein and crystals for every patient opting for elective surgery. The nomogram based cutof of FBS and Urine pH enables for exploring the scope of minimizing the stay from the existing level of 8 – 9 days to below 5 days.

Biography of Presenting Author:
Dr. Harini Sivamani, have expertise in analytics and research with specialization in Obstetrics and Gynaecology having Diplomate in National Board India, holding Part 2 MRCOG London. She has in her credit Intellectual Property Rights in System and device for fetal weight estimation, published over 6 papers in International Conferences within a span of 3 years. Practising and Faculty in Velammal Medical College Hospital and Research Centre. She is awarded Best Postgraduate in 2019 and Distinguished Professional Excellence Award in 2021.