



## Molecular characterization of microorganism at tip of catheters of all the interventional procedure done in CKD patients with or without diabetic mellitus – A study from developing country

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### Abstract:

According to the United States Renal Data System (USRDS) registry, infection is the second leading cause of death in patients with ESRD (the first is cardiovascular disease), and septicemia accounts for more than 75% of these infectious deaths<sup>1</sup>. The detailed study of microorganisms found at the tip of catheters of all interventional procedures would be helpful for proper management of these patients. as Infection is an important cause of morbidity and mortality among patients with ESRD Investigation number of male to female ratio were 1.5:1 with 82.22 % were of age group <60 years and 17.78 % were with age group >60 years. The present study showed 8.89 % were having HB >11 gm/dl & 91.11% were having HB <11 gm/dl, .The cholesterol level of <150 mg/dl were seen in 13.33 %, between 150 – 220 mg/dl were seen in 84.4 % and S, Cholesterol level > 220 mg/dl in 2%. In the present investigation thirty 8 patients were having normal thyroid profile in CKD patient and 7 patients suffered hypothyroidism. In the present work twenty four patients had IJV dialysis catheter, twelve patients had femoral. Dialysis catheter, one patient had subclavian dialysis catheter, Foley's catheter were in fourteen patients & three

vein flows were included in study. Other catheters included were three APD (Acute Peritoneal dialysis) catheter & four CAPD (Continuous Ambulatory Peritoneal Dialysis) catheters. In the present study clinically 15.5% patient had catheter related infection (CRI) in form of Fever with chills and rigors. The cholesterol level associated with catheter related infection (CRI) of <150 mg/dl, were 14.28% patient & with value of 150 – 220 mg/dl, were 85.7% patient. TLC count associated with catheter related infection (CRI), the number of patient with value more than 10.8 and the patient were 57.1% and value of less than 10.8, only in 42.8% patient. The serum albumin level with catheter related infection (CRI) of value <3.5mg/dl were seen in 85.71% and value < 3.5mg/dl seen in 14.29%. Thus, the present study is an effort to cover almost all morphological characterization and biochemical changes of microorganism at the tip of catheter in CKD (Chronic kidney disease) patient. This study will provide an additional tool for management and treatment of infection in CKD (Chronic kidney disease) patient due to dialysis catheter, vein flow, Foleys catheter, APD (acute peritoneal dialysis) & CAPD (Continuous Ambulatory Peritoneal Dialysis) catheter.

### Biography:

Professor Dr. Punit gupta is MBBS, MD (Medicine), DM (Nephrology) and PhD. He is the Honorary Nephrologists to the Governor of Chhattisgarh State since 2009. He is Chairman and Members of many important academic and management committees of various Government Medical Institutions in the country and the Pt. Deen Dayal Upadhyay Health Sciences University, Raipur. He has guided over 100 Postgraduate & Technologist student for their thesis & Project in Nephrology & Research and also served as an examiner for the university examinations. A man of researches and publication, he has presented more than 160 research papers and abstracts on Kidney Diseases in Tribal populations at Renowned National and International Conferences. He was felicitated for being the only research scholar who had presented 29 abstracts in Indian Society of Nephrology conference, Pune and 11 research papers at Asia Pacific congress of Nephrology, 2008 in Malaysia on tribal kidneys



## Metabolic syndrome: Prevalence and risk factors in intermediate and secondary adolescent female students in Saudi Arabia

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### Abstract:

Metabolic Syndrome (MS) has become one of the major public health challenges worldwide. There are specific risk factors for adolescence age, such as obesity, dysglycemia, dyslipidemia and elevated triglycerides levels. MS is a cluster of metabolic disorders that include being overweight and obese, physically inactive having certain genetic factors and getting older. A cross-sectional study was conducted to assess the prevalence and risk factor among adolescent females in National Guard schools in Jeddah, Saudi Arabia. A total number of 261 female school students aged 12-18 years participated in this study from Um Kalthoom Secondary School, no 41 and Zainab Bint Jahsh High School, no 25, both located in Jeddah, Saudi Arabia. The participants were divided into three groups fasting, random and impaired glucose sample groups. The prevalence of MS in each group was 13.4%, 15.9% and 10.7% respectively. The prevalence of MS in the fasting glucose group was more common among high school students (8.18%) while the random glucose group showed more prevalence in intermediate school students (9.78%). The most prevalent MS criterion was high waist circumference in all the groups. When assessing the potential risk factors that might contribute to the prevalence of MS; sedentary lifestyle of the students showed the higher percentage (49%) followed by fast food consumption (23%). This study was conducted to provide evidence of the increasing prevalence and risk factors of

metabolic syndrome in adolescent female students in order to raise awareness and improve future health care plans. It is recommended to implement a nutritional lifestyle in the students' daily routine. In addition to promoting physical activity by implementing sport activities and weight reduction programs in order to avoid the serious complications of MS.

### Biography:

Ramah Waheed Calacattawi is currently pursuing his Medicine at King Saud bin Abdulaziz University for Health Sciences, Saudi Arabias



## Correlation of vitamin D with HbA1c in CAD diabetic and non CAD diabetic patients in India

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### Biography:

Vinay Singh has completed his PhD in Medicine from Faculty of Medical Sciences, University of Delhi, India and MBA in Project Management from Sikkim Manipal University, New Delhi and also one year full time Advance Post Graduate Diploma in Clinical Research from Clinical Research Education and Management Academy, India.

### Abstract:

Vitamin D deficiency is a major concern across the globe. Evidence indicates that vitamin D supplementation can improve health condition in several diseases including diabetes. The objective is to find out the correlation of vitamin D with HbA1c in Coronary Artery Disease (CAD) diabetic and non CAD diabetic patients in northern India. This is a cross-sectional study conducted in the Department of Medicine and Department of Biochemistry, Maulana Azad Medical College, New Delhi, India and included 324 type-2 Diabetes Mellitus (T2DM) patients of age 50 years and above who have a history of diabetes for more than five years. Patients who were already taking vitamin D supplements were excluded from this study. Patients were equally divided into two groups. Group-1: CAD diabetic (N=162), group-2: Non CAD diabetic (N=162). Height, weight, BMI, waist circumference, Vitamin D was measured in all patients. SPSS software was used to analyze the data. The correlation coefficient was calculated in both groups with respect to vitamin D and HbA1c. An inverse relation has been observed in CAD Diabetic (r value -0.0794) and non CAD diabetic (r value -0.011) when it was compared with vitamin D values. In our study, we found that patients having higher vitamin D levels have better glycemic control and have lower HbA1c values. Therefore, vitamin D supplementation can improve glycemic control in diabetic population.



## Eversense sensor and transmitter – interesting radiological images seen on plain X-rays of upper arms

Sasha Wilems

### Editorial

A 43-year-old woman presents to discuss continuous glucose monitor (CGM) technologies. She has type 1 diabetes mellitus diagnosed at age 14 and has been on insulin pump since 2001 which was upgraded to Medtronic™ 630G in July 2017. She has adequate glycemic control (A1c 7.3%), but finger-stick blood glucose levels fluctuate widely with occasional hypoglycemia. Past surgical history was noncontributory. She exercises regularly, walking 30 minutes several times per day with a goal of 7000 steps per day. She tried to use a CGM in 2018 (Medtronic) but she discontinued the CGM due to frequent alarms. Patient reports the alarms were not due to highs or lows, but due to difficulty with obtaining accurate readings. Patient consulted an endocrine clinic to improve blood glucose monitor with new CGM technology. Patient subsequently developed bilateral arm pain intermittently for which primary care provider ordered X-ray of both arms which shows the Eversense™ sensor and transmitter on the right arm and the sensor alone on the left arm. CGM devices measure the glucose level of interstitial fluid which correlate well with plasma glucose. Glucose levels are measured every 5-15 minutes, depending on the device. The Eversense™ sensor is placed in the upper arm by a physician. Once inserted, it continuously measures glucose levels for up to 3 months. The Eversense™ smart transmitter sits over the sensor on the upper arm. The transmitter is water-

resistant, rechargeable, and can be easily removed. Not only can the transmitter send data to the Eversense™ Mobile App but it can also provide on-body vibration alerts when glucose level fluctuates high or low. The Eversense™ Mobile App receives and displays the data easy-to-read charts and graphs, making it easy for patients to monitor their blood glucose. The difference between Eversense™ CGM system compared to other CGM devices are that (a) there is no weekly sensor self-insertion since Eversense™ CGM lasts up to 3 months, (b) sensor is placed under the skin; thus, no concern about it falling off, (c) no separate receiver is required; data, trends and alerts can be viewed on mobile device; (d) highs and lows can be detected quickly. Many CGM devices allow patients to share their blood glucose data in real time with friends, relatives, and caregivers using a smartphone app, which may be particularly important when patients have hypoglycemia. The case demonstrates an interesting radiological finding of an implantable CGM sensor, and also the importance of awareness of various CGM systems with different safety advantages to improve diabetic care.