

# Journal of Clinical Nephrology

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**Research Article**      **Published Date:-2019-11-27 00:00:00**

[Perceived causes and prevention of catheter-associated urinary tract infections among spinal cord injured patients](#)

Catheter-associated urinary tract infection (CAUTI) is among the most common nosocomial infections especially in acute care settings. Its economic and unanticipated health implications make it burdensome for the healthcare providers and patients. The paper examined the perceived causes and mode of preventing urinary tract infections in patients with spinal cord injury. Qualitative research approach was utilized; the study site was a Tertiary Hospital in Nigeria. Eight (8) in-depth interviews (IDI) were conducted with healthcare providers managing patients with spinal cord injured in the hospital. The major risk factors causing urinary tract infection identified include financial problems, organization of care, human error, hospital environment and patient-related factors. To prevent urinary tract infections among patients in the hospital, a number of suggestions were made by the participants such as training of caregivers and educating patients and relations. The authors concluded that the incidence of CAUTI could be reduced in the hospital if the opinions of stakeholders are fairly considered.

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**Research Article**      **Published Date:-2019-04-16 00:00:00**

[The pattern of blood pressure and renal function among children with Sickle Cell Anaemia presenting in a tertiary health institution in Nigeria](#)

**Background:** In sickle cell anemia (SCA), compromise of the renal vasculature due to sickled red cells has been recognized.

**Objectives:** To assess the renal function and blood pressure pattern in children with sickle cell anaemia (SCA) presenting in a tertiary institution.

**Method:** A cross-sectional study of patients with sickle cell anaemia (SCA) over six months involving the use of questionnaires, general physical examination, blood pressure, investigations for haemoglobin genotype, urinalysis, serum creatinine, screening for hepatitis B and HIV.

**Results:** 51 children with SCA were seen. The prevalence of impaired renal function as defined by reduced eGFR <90mL/min/1.73m<sup>2</sup> in this study was 27.5%, previous hospital admission and blood transfusion were associated with reduction in eGFR but blood pressure did not have significant correlation with the eGFR. The overall mean age at diagnosis of SCA was 4.09 ± 3.33 (years).

**Conclusion:** Impaired renal function is a major comorbid condition in children with SCA. In countries/locations where there is no newborn screening for sickle cell disease, diagnosis is delayed, thus detecting impaired renal function may be delayed, therefore the need for early detection and management is imperative.

Introduction

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**Research Article**      **Published Date:-2019-04-15 00:00:00**

[Can bloodstream infection be predicted by nasal culture in hemodialysis patients?](#)

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The blood and drainage cultures are suggested for early diagnosis of bloodstream infection (BSI), which are time consuming and laborious. Nasal colonization of bacteria is one of the modalities, occasionally can predict BSI. We hypothesized that nasal culture, as an accessible fluid may be helpful to predict future BSI in hemodialysis patients. The present prospective study evaluated 63 patients undergoing maintenance hemodialysis at the Pars hospital dialysis center, Tehran, Iran, from November 2015 until February 2016. Nasal fluid of patients were collected from the 1–cm internal anterior part of both nostrils of patients by a sterile swab and cultured in Trypticase soy agar. All patients were followed for three months for BSI. The results of first nasal fluid sample revealed that 33.3% in first sampling and 27.0% in sampling had positive nasal fluid culture. The type of bacteria in all positive cases was *Staphylococcus aureus*. The rate of BSI infection in the patients with positive and negative first nasal fluid culture was 9.5% and 2.4% respectively with no significant difference. We found also no significant association between BSI positivity and nasal culture results so that positive BSI was revealed in 5.9% of patients with positive nasal fluid culture and 4.3% in those with negative nasal fluid culture with no meaningful difference. None of the baseline variables including age and gender, underlying risk factor, access, or duration of dialysis was associated with BSI positivity. In hemodialysis patients, BSI may not be predicted by nasal fluid culture positivity.

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## Case Report

**Published Date:-2019-04-03 00:00:00**

[Anti-glomerular basement membrane disease: A case report of an uncommon presentation](#)

Anti-glomerular basement membrane (anti-GBM) disease is an uncommon autoimmune disease that classically presents as an aggressive necrotizing and crescentic glomerulonephritis (CG), with or without pulmonary hemorrhage, and typically does not relapse. The pathologic hallmark is linear staining of GBM for Immunoglobulin G (IgG) which binds to the alpha-3 chain of type IV collagen. Recent reports have noted the occurrence of anti-GBM disease with atypical clinical presentations. We describe a case of a 22-year-old female presenting an anti-GBM disease with typical histological features with a singular clinical presentation with lower limb edema, elevated serum creatinine and nephrotic range proteinuria. Renal biopsy showed signs of chronicity and direct immunofluorescence microscopy demonstrated diffuse, intense linear positivity for IgG. All serologic tests were negative, including anti-GBM antibodies. Hence, a diagnosis of atypical anti-GBM disease was made. The patient was treated initially with mycophenolate mofetil and corticosteroids. After 3 months she began to aggravate renal function so mycophenolate of mofetil was discontinued and a low dose cyclophosphamide was initiated.

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## Research Article

**Published Date:-2019-04-03 00:00:00**

[Peritonitis: Culprit for peritoneal dialysis decline](#)

Peritonitis is the main complication of peritoneal dialysis caused the withdrawal of treatment like peritoneal dialysis which was used as primary treatment modality few years back in Pakistan. With this motto to know the exact cause of peritonitis this retrospective study was done and 35 out of 42 pervious peritoneal dialysis patients who had peritonitis were analyzed using old data. A total of 57 bags of all these peritonitis patients were analyzed in department of microbiology during the year 2007-2011. Out of these bags positive culture was obtained from 42 bags (74%). Most of patients with positive culture were undergoing acute peritoneal dialysis 66.67% and rest were on chronic ambulatory peritoneal dialysis. Main concern was the yield of organisms causing culture positive peritonitis. It was found that bacterial peritonitis was positive in 80%, fungal peritonitis was 11% and mycobacterium tuberculosis peritonitis was 09%. Various culture techniques along with Gram Stain, Zeihl Nielsen Stain and Auramine stain were used for knowing the yield.

Limitations: Old and only small available data of peritonitis patients and stop of further peritoneal dialysis.

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## Case Report

**Published Date:-2019-04-03 00:00:00**

[A serious pulmonary infection secondary to disseminated Strongyloidiasis in a patient with Nephrotic syndrome](#)

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We report a case involving infection with *Strongyloides stercoralis* found in the sputum of a 66-year-old male patient who had a medical history of nephrotic syndrome and was treated with methylprednisolone and monthly intravenous cyclophosphamide therapy 3 months previously. This patient presented with stubborn pulmonary symptoms and signs, which was the mechanical destruction caused by larval migration. We found strongyloides in his sputum that provided diagnostic proof.

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**Research Article**

**Published Date:-2019-03-28 00:00:00**

[Challenges of haemodialysis: A single centre experience in South West Nigeria](#)

**Background:** Haemodialysis is the commonest method of Renal Replacement Therapy in Nigeria. Despite an advancement in the technicality and better understanding of haemodialysis, a number of complications are known to be associated with this procedure..

**Objective:** We aimed to highlight our experiences and share some of the uncommon complications encountered during haemodialysis and present the outcome of our patients.

**Subjects and methods:** A retrospective review of 101 patients during the last two years was done. Data extracted include: sociodemographic characteristic, aetiology of kidney disease, type of vascular access, intradialytic complication and outcome of treatment.

**Results:** The total number of dialysis session during the period was 823. Males constituted a higher proportion (64.4%) and were found to be older than female patients 49.8 vs 42.8 years (P=0.001).

Majority (89.1%) had chronic kidney disease while chronic glomerulonephritis was the main cause of CKD as seen in about 45% of the patient.

Due to the cost implication, only 2(1.98%) were able to undergo 3 sessions of dialysis per week for up to 1 month.

Vascular access was femoral (66.3%), internal jugular vein (25.7%), while only 2% used Artero-venous-fistula and one patient had femoral vessel pseudoaneurysm from frequent cannulation.

The commonest complication was hypotension which was present in 15.8%. Twenty-eight deaths were recorded, 44(43%) were either lost to follow up or absconded while 5% were transplanted at a referral centre.

**Conclusion:** Challenges of renal replacement therapy is overwhelming in our country due to poor human and financial resources. Early diagnosis and adequate government support are advocated.

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**Research Article**

**Published Date:-2019-03-12 00:00:00**

[Chronic Kidney Disease: A single day screening on World Kidney Day for five consecutive years](#)

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**Introduction:** Chronic kidney disease is a costly and burdensome public health concern. Delayed recognition and treatment of CKD may predispose patients to unfavorable future outcomes and burden the healthcare services. The early detection of disease via screening programs is widely recommended. The present study is a hospital camp-based screening for detecting patients with chronic kidney disease in Varanasi from 2014-18.

**Methods:** The study subjects constituted 436 apparently healthy adults (age  $\geq$ 18 years) of Varanasi. Information on socio-demographic profile, personal characteristics and clinical investigations were recorded. Stepwise binary logistic regression analysis was applied to find the significant predictors of chronic kidney disease.

**Results:** Median age of the study subjects was 40.5 years. There were 39.7% males and 60.3% females. Chronic kidney disease was found in 23.9% subjects. Underweight, diabetes mellitus, hypertension, smoking status and higher creatinine levels came out as significant predictors of chronic kidney disease.

**Conclusion:** We screened apparently healthy individuals and found very high percentages of chronic kidney disease and its predictors. Henceforth, understanding the preventable and modifiable risk factors of chronic kidney disease becomes a prerequisite to intervene before risk populations reaches to irreversible stages of adverse future outcomes.

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**Case Report**                      **Published Date:-2019-02-22 00:00:00**

[Hypocomplementemic interstitial nephritis with long-term follow-up](#)

Prednisone-sensitive hypocomplementemia, renal insufficiency, and kidney biopsy demonstrating severe tubulointerstitial nephritis (TIN), storiform fibrosis, and tubulointerstitial immune deposits are typical of IgG4-related tubulointerstitial nephritis and hypocomplementemic interstitial nephritis. A diagnosis of hypocomplementemic interstitial nephritis requires clinical and pathologic exclusion of IgG4-related tubulointerstitial nephritis. We describe a patient with hypocomplementemic interstitial nephritis who did not develop diagnostic features of IgG4 related disease (RD) over 2-year follow-up. We conclude that hypocomplementemic interstitial nephritis could be on a biologic spectrum with IgG4-related disease, but not all cases will develop the abundance of IgG4-positive plasma cells, systemic manifestations, or elevated immunoglobulin levels characteristic of IgG4-RD.

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**Research Article**                      **Published Date:-2019-01-24 00:00:00**

[Anti-Inflammatory probiotic biomarkers in Fermented foods](#)

We present below a mechanistic molecular approach for development of Anti-Inflammatory biomarkers of Probiotic Bacteria in Fermented Foods. Probiotics are live microorganisms that promote human health by counteracting the noxious toxic gut microflora in human intestine, by modulating of the tight junctions, and by increasing mucin production, enforcing intestinal epithelial cell barrier function, modifying microbial community within the gut intestinal disorders, and improving immune responses associated with chronic inflammation in experimental animal models, collectively enhancing human health. Cytokine secretion by intestinal epithelial cells and macrophages are regulated by probiotics through key signaling pathways such as nuclear factor- $\kappa$ B and mitogen-activated kinases, resulting in alleviation of several disorders such as allergies, diabetes, obesity, heart diseases and cancer. MicroRNAs are small non-coding RNA molecules involved in transcriptional and post-translational regulation of gene expression by inhibiting gene translation. Using in vitro and in vivo approaches in cell lines and mice models to study effects of probiotic conditional media and heat-killed bacterial strains with anti-inflammatory effect to elucidate the mechanisms by which probiotics affect signaling pathways, and by using global cytokine and microRNA gene expression analyses approaches to develop biomarkers for studying different pro- and anti-inflammatory activities, and using statistical approaches to analyse the data, we show that cytokines and miRNAs have an essential role in regulation of cancerous and inflammatory pathways. This mechanistic approach will result in developing specific disease biomarkers for the early diagnosis of certain pathogenic states, as well as evaluating the effect of different dietary components on developed biomarkers in health states that will promote and enhance human health. Comparing the concordance of the in vitro to the in vivo research findings will confirm the correspondence of both approaches to each other. Moreover, this study will have a major public health relevance in elucidating the role of miRNAs and their targets in inflammation, paving the way to diagnosing and treating of pathogenic human disease stages.

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[Chronic kidney disease in women: a cross sectional screening in a tertiary care hospital in Varanasi](#)

Background: Chronic Kidney Disease is no longer considered just a health burden today but a major health priority owing to its high treatment costs and poor outcome. World Kidney Day and International Women's Day in 2018 coincided, thus offering an opportunity to reflect on the importance of women's health, and specifically their kidney health. The current study aims to identify chronic kidney disease in women through a cross sectional screening in hospital based camp in Varanasi on World Kidney Day.

Methods: 138 females attending a health camp were screened for clinical parameters like serum creatinine, random blood sugar, and pregnancy complications. Demographic and anthropometric parameters were noted. Ordinal logistic regression analysis was used to find the predictors of chronic kidney disease stages.

Results: The median age of the participants was 36 years. The prevalence of chronic kidney disease was 6.4% with 1.4% of Stage 1, 2.1% of Stage 2, 1.4% of Stage 3 and 1.4% of Stage 4. Women with diabetes were nearly 4 times at a greater risk of developing higher stages of chronic kidney disease compared to women without it. With a unit increase in serum creatinine levels, women were nearly 13 times more likely to develop higher stages of chronic kidney disease.

Conclusion: Serum creatinine levels and diabetes were the significant predictors for the development of higher stages of chronic kidney disease. Early screening for kidney diseases in women could reduce the load of health care delivery system that is involved in renal replacement therapies.

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[Relationship between Fetuin-A and vascular or valvular calcification in hemodialysis patients](#)

Purpose: Deficiency of Fetuin A, as a calcification inhibitor, is assumed to be involved in vascular calcification in patients on maintenance hemodialysis (MHD). This study examined the relationship between serum Fetuin-A and vascular and valvular calcification in a cohort of MHD patients.

Methods: The study was conducted on 122 MHD patients. Serum levels of calcium, phosphorus, parathormone, and Fetuin-A were tested. Intima-media thickness (IMT)  $\geq 0.8$  mm and the presence of stenosis  $>50\%$  or plaques in carotid doppler sonography were considered as vascular calcification. Calcification of cardiac valves or mitral annular calcification in two-dimensional echocardiography, were considered as cardiac valvular calcification. The presence of any or both of the two conditions was defined as cardiovascular calcification (CVC).

Results: Fetuin-A was lower than normal in 37% of 122. Totally 106 patients (87%) had CVC, who were older ( $61 \pm 14$  vs.  $38 \pm 14$  years,  $P < 0.001$ ), more affected by diabetes (54% vs. 13%,  $P = 0.007$ ), had a longer dialysis vintage (median 5 vs. 2 years,  $P = 0.006$ ), lower levels of creatinine ( $8.9 \pm 2.8$  vs.  $11.9 \pm 3.1$  mg/dL,  $P < 0.001$ ) and higher levels of calcium ( $8.7 \pm 0.7$  vs.  $8.4 \pm 0.5$  mg/dL,  $P = 0.026$ ). There was no significant difference in mean Fetuin-A level between the two groups ( $P = 0.101$ ). In logistic regression increased age (OR=1.1, CI 95%=1.1 - 1.2) and serum calcium (OR=2.8, CI 95%=1.1 - 7.6), and diabetes mellitus (OR=7.4, CI 95%=1.1 - 47.4) were risk factors.

Conclusion: This study showed that 87% of our patients had vascular and/or valvular calcification. Increased age and calcium level and diabetes were the predictors of CVC, whereas Fetuin-A was not.

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