

OUR GUEST EDITOR



Dr. Narinder Pal Singh

Dr. Narinder Pal Singh is currently working as Professor of Medicine and In-charge of Nephrology at Maulana Azad Medical College & associated Lok Nayak Hospital, Delhi. He is an excellent clinician, researcher and postgraduate teacher and has over 120 publications, 20 chapters in different books, and has edited a book on poisoning (in press).

Prof. N.P.Singh has been the recipient of several awards and oration, notable amongst them are the State Award by Delhi Government 2007-08, API Searle Oration, Dr Wig Oration of API Delhi State Chapter, Shurvir Singh Visiting Professorship, WHO fellowship on epidemiology & biostatistics, Smt. Pawan Kumari Jain Oration. Considering his academic achievements, he has been awarded fellowships of the Indian College of Physicians of Indian Society of Nephrology, International Medical Science Academy and Indian Academy of Clinical Medicine. He has recently finished his MBA in Health Care from FMS, Delhi University.

He has been involved in the scientific deliberations of APICONS, for several of earth and has been and on various committees of the APICON held at Delhi. He has been appointed peer reviewer for some of the national & International fames the American Journal of Kidney Diseases, Haemodialysis International, JAPI, JIACM and is presently on National Advisory Board of JAP & JIACM.

He hold important position in some of the prestigious Scientific bodies such as Governing Body member of API(2008-11), Executive Member Delhi Medical Council, Joint Editor JAPI, Secretary of Delhi Nephrology Society served as Joint Secretary of the API-Delhi chapter. Member of International Society of Nephrology and European Renal Association & is, President and Secretary of the Faculty Association & Secretary of the Ethics Committee of MAM College. Dr. N.P. Singh has been actively involved in the public awarness programmes; has been Organizing Kidney disease detection camps periodically, at the community level.

EDITORIAL

RENAL STONE DISEASE - AN INDIAN PERSPECTIVE

Nephrolithiasis (from Greek *nephros*, "kidney" and *lithos*, "stone") refers to the condition of having kidney stones. The existence of kidney stones has been recorded since the beginning of civilization, and lithotomy for the removal of stones is one of the earliest known surgical procedures. In 1901, a stone was discovered in the pelvis of an ancient Egyptian mummy, and was dated to 4,800 BC. Part of the Hippocratic oath contains an admonition about the dangers of operating on the bladder for stones.

Renal stone disease is third commonest disorder of urinary tract after urinary tract infection (UTI) and benign prostatic hyperplasia (BPH). It is more common in a region of India, called "stone belt", which runs in the north part of India. It is generally believed that risk of developing nephrolithiasis in normal adults is lower in Asia (1-5%) compared to the figures for Europe (5-9%) and United States (13%). According to estimates from Western cohorts, males are two to four times more likely to be afflicted with kidney stone disease than females¹. The incidence of kidney stones peaks around 40-60 years age in males and around late 20s in females². The studies assessing composition of renal stones suggest that renal stone disease in India is probably different from other nations. Whether this is related to our environmental and/or genetic factors will be interesting to see.

Renal calculi formation is a relatively complex process and involves an interplay of various physiochemical and anatomical factors. The predisposition to urolithiasis in all these conditions are also contributed by the intricate anatomical structure and complex development of the urogenital system. The article Mishra et al briefly describes the gross anatomical structure and the development of the urinary tract and various congenital anomalies which can lead to obstructive uropathy thereby leading to urinary stasis and higher chances of urolithiasis. Urinary organs develop from intermediate mesenchyme.

Kidney stones may form when the normal balance of water, salts, minerals, and other substances found in urine changes. There are several types of kidney stones based on the type of crystals of which they consist. The majority are calcium oxalate stones, followed by calcium phosphate stones³. One of the most common factors in the formation of kidney stones happens to be hereditary. Urinary tract infections, kidney diseases and metabolic disorders such as hyperparathyroidism are also known to increase the chances of a person developing a stone. Aggarwal SK in his article reviewed the various etiopathogenetic factors for development of nephrolithiasis.

Symptoms of kidney stones are many, the most obvious and often spoken about, is the severe sharp kidney pain in the flank or side that are accompanied with fever, nausea, and even mental confusion. Other people pass kidney stones and only find out when an x-ray or a urine specimen reveals them. Some experience microhematuria (microscopic blood in urine) gross hematuria, or even granular specks when urinating. Pain, infection, or hematuria is classical triad of symptoms reported by patients with renal stone disease⁴. Dramatic costovertebral angle tenderness is common; this pain can move to the upper or lower abdominal quadrant as a ureteral stone migrates distally

Radiological investigations play a key role in diagnostic work up of urolithiasis which has been discussed in detail by. Sapna Singh in her article. While conventional investigations like X ray KUB, USG and IVP are still considered essential for diagnosis, newer modalities like