



The Medical **Bulletin**

In Nephrology

Pearls of practice- Geriatric kidney health

- Aging kidney- Anatomy and function
 - Kidney function declines in a healthy individual from 30 years
 - Peak GFR is seen at 30 years
 - There is a decline in GFR in a normal individual by 1ml/min/1.73m² per year
 - If your GFR at 30 years is 100 it will be only 50 at the age of 80 years

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 - If your GFR at 30 years is 100 it will be only 50 at the age of 80 years
 - The number of nephrons decreases with age
 - Kidney weight decreases by 10% every decade after 40 years
 - Kidney size may decrease by 0.5 cm every decade after 40 years
 - Kidneys of elderly people are not able to concentrate and dilute urine maximally
 - Aging is characterized by progressive tubular dysfunction, decreased sodium reabsorption, potassium excretion, and urine concentrating capacity
 - More prone to acute kidney injury and progression to Chronic kidney disease

Renal diseases in elderly

- Diabetes and Hypertension are very prevalent in elderly and are important risk factors for renal disease
- Hyponatremia



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- o Elderly are very prone to hyponatremia esp elderly females on thiazide diuretics
 - o Hyponatremia is a very common emergency in elderly and may need hospitalization
- Frequent falls in elderly may be an early symptom of hyponatremia

Monitor sodium in patients on diuretics, suspect hyponatremia in elderly patients with altered sensorium(in addition to CV event , hypoglycemia and drugs)

- **UTI**

- o Frequent getting up at night for passing urine may be a sign of prostate enlargement
- o Elderly females may suffer from urine incontinence due to weakness of bladder muscles and frequent urinary infections are common. Bladder exercises, Estrogen creams may help

Check prostate and post void residue in males and Post void in females

- **Nephrotoxicity of drugs**

- o Excretion of many drugs is decreased in elderly due to declining kidney function and hence drug doses have to be adjusted for elderly population.
- o Important drugs which need dose reduction in elderly include sedatives,
- o NSAIDS are nephrotoxic in elderly esp if they are dehydrated
- o Elderly people are on polypharmacy and prone to drug interactions hence always check the complete prescription

Always calculate eGFR before prescribing drugs, avoid nephrotoxic drugs

- **Renovascular disease**

- o Renovascular disease, which is the narrowing or even blockage of the renal artery, can reduce the blood supply to kidneys and reduce function. It is the most common reason for kidney failure in senior adults esp after starting ACE inhibitors or ARBs.

Rule out renal artery stenosis before initiating ACEi or ARBs in elderly

“Simple precautions will help Save kidneys”

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