Ward MEDICATION MANAGEMENT

E- News

Volume 1, Issue 4: July 2015

From the Clinical Director

Safe dosage of medications presents a complex challenge for clinicians. Many factors influence the selection of the right dose of medication for an individual patient – these can include things like the age of the person, the effects of other medications (refer Ward MM E-news June 2015), the purpose for which the medicines are being used, and the current functioning of major organ systems. One major factor to consider when evaluating the dose of a medication is the renal function of the patient, as the kidneys are a major route of elimination for many drugs. If the dosage is not adjusted to accommodate the effects of renal impairment, significant toxicity can develop rapidly, with potentially dire consequences.

With elderly people, renal function can be variable and unstable, and can change markedly in the space of a very short time. Especially in the summer months, or during periods where the dosage of diuretic agents is being adjusted, a major risk factor of acute renal impairment is dehydration. Under these circumstances it is necessary to monitor residents very closely, and to seek advice about medications that might be influenced by a change in renal clearance.

Renal impairment can sometimes be less obvious in the elderly. The serum creatinine concentration is used to estimate renal function, but it is important to understand that creatinine is a by-product of muscle metabolism – people with less muscle mass (particularly frail and elderly people, and especially older women) make less creatinine and so may have a serum creatinine within the reference range even if they have significant renal impairment. Your Ward MM pharmacist can provide detailed advice about assessment of renal function using special equations that take factors such as age, gender and body mass into account.

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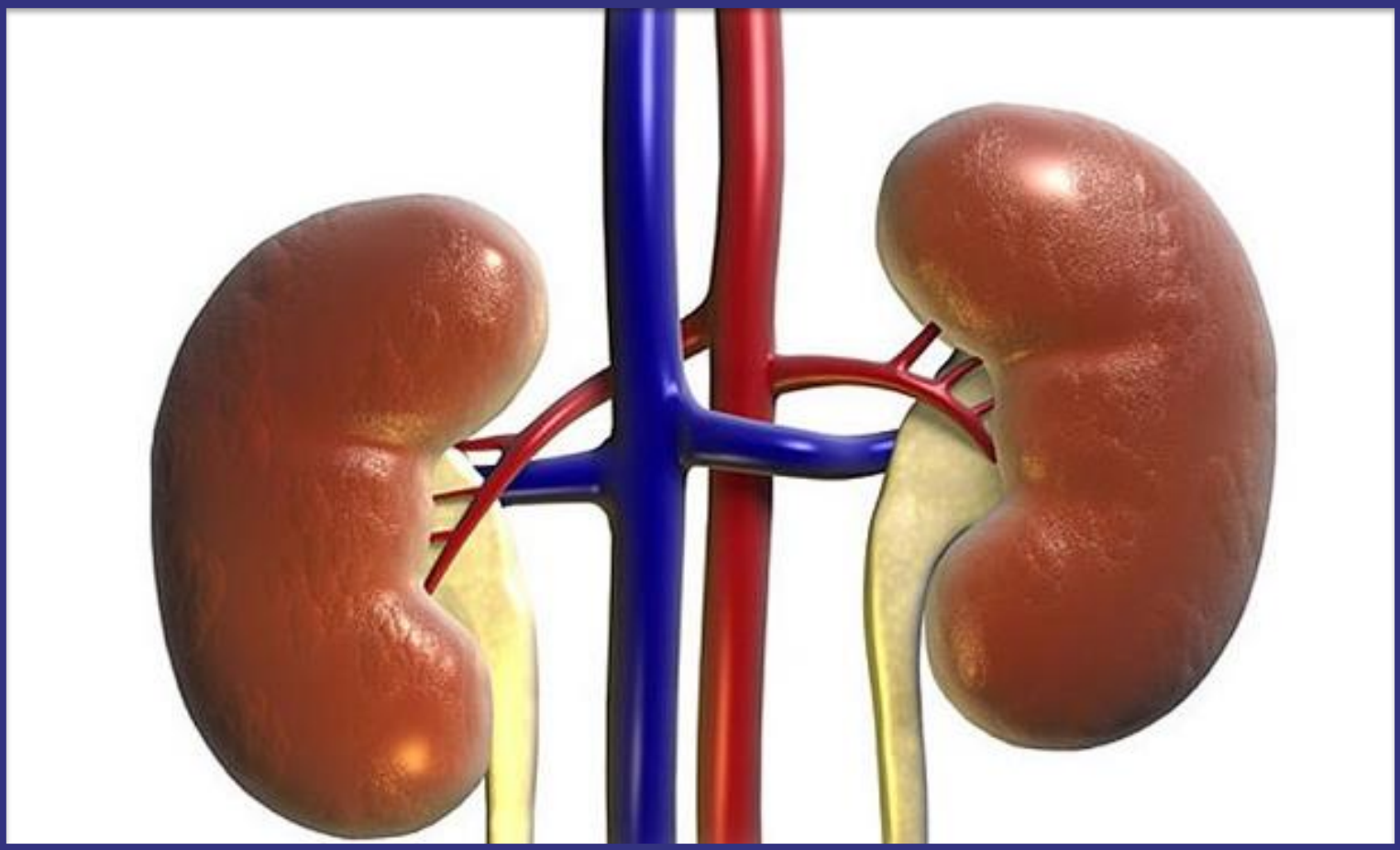
The introduction of new medications can sometimes lead to compromised kidney function. Examples include diuretics (such as frusemide and spironolactone), ACE inhibitors (e.g. perindopril and ramipril), and AT2 receptor blockers (e.g. irbesartan and candesartan). Special caution is always needed when using NSAIDs for older people – common examples include diclofenac, ibuprofen and meloxicam. Your Ward MM pharmacist can assist by providing specialist information and support whenever needed.

Dr Chris Alderman, Director of Clinical Excellence, Ward MM.



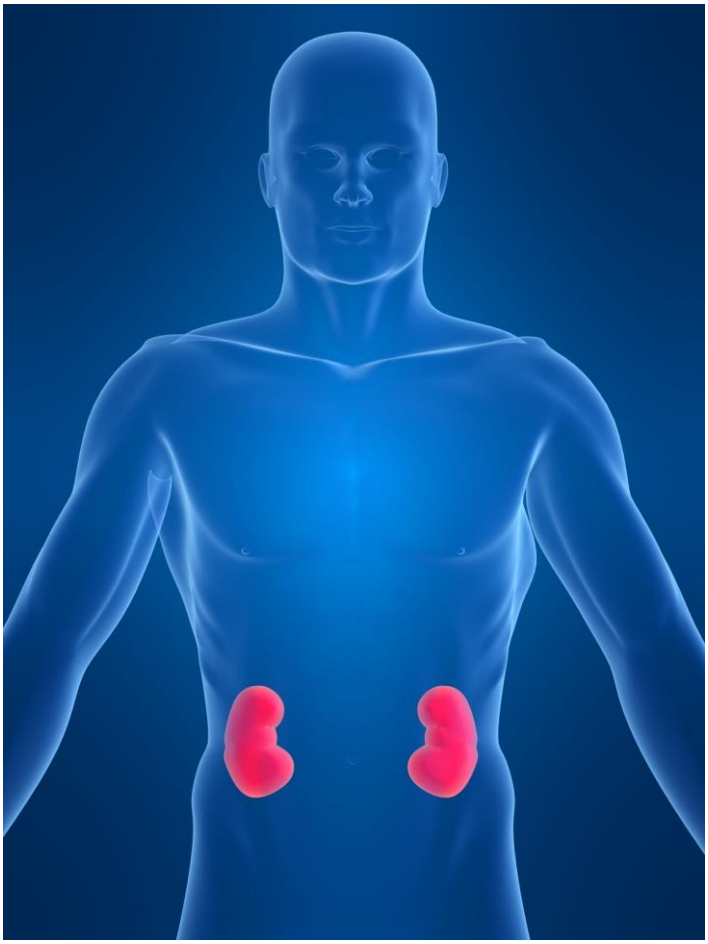
Feature Article:

Medicines and renal impairment

There are many medications that require an adjustment of the dosage in the context of impaired kidney function. If this vital step is missed, the patient can develop serious toxicity.

Serious toxicity can result if drug dosages are not adjusted in renal impairment.

In this edition of the Ward MM newsletter we discuss some of the medications that are commonly used in the Aged and Extended Care setting that may often require dosage modification in the context of renal impairment.



Special care must be taken when prescribing some medications for people with impaired kidney function. Some examples, but not an exhaustive list, are provided here.

Metformin

Metformin is a useful drug for management of diabetes, but can cause a very serious side effect called lactic acidosis. Renal impairment substantially increases the risk of this complication. Lactic acidosis has been seen even when metformin is used at a low dose. This drug should be avoided altogether for people with severely impaired kidney function. The dose needs to be reduced for people with moderate impairment of renal function, with a maximum daily dose of 1000 mg. Metformin may need to be temporarily held for people undergoing surgery, or during episodes of dehydration.

Lithium

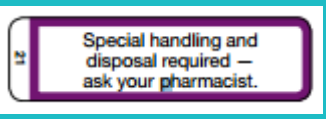
A widely used psychotropic drug, lithium depends 100% on the kidneys for clearance from the body. It has a low therapeutic index, and toxicity can evolve rapidly in people with compromised renal function. Features associated with lithium toxicity include nausea, vomiting and diarrhoea – impaired oral intake and increased fluid loss may compound dehydration and lithium toxicity.

Allopurinol

Allopurinol is mainly used for the prevention of gout. Its active metabolite is excreted in the urine and can build up in patients with reduced renal function. Hypersensitivity reactions are increased in patients with renal impairment, and in those who are concomitantly taking allopurinol and some diuretics. For many people with impaired renal function, a daily dose of 50 – 100 mg may be appropriate, rather than the full dose of 300 mg daily that is used for people with unimpaired kidney function.

Find more information about medicines which affect renal function call 1800 WARDMM.

Quick Tip



Special Handling

Watch for the label!

Certain medicines can be potentially hazardous to staff and need special care when handling. Examples include cytotoxic agents and medicines that need special care if handled by a pregnant women, as exposure may cause damage to the foetus.

Always check with your pharmacist if in doubt.

Quick Tip

Antibiotic Administration – UTI's

Antibiotics at night for UTIs…

Drugs like trimethoprim work best when given at night – this way the drug has maximal "dwell time" in the bladder.

Your Questions Answered

Notes from facilities serviced by Ward MM

It is quite common for us to receive similar enquiries from more than facility in our network. In this section we summarise questions with a common basis – as a part of our "connect – network – share" ethos, we share the information with all of our facilities.

Q. Why is it important HOW a spacer is washed?

A. There are special instructions on how to wash a spacer to ensure it works properly when in use. A spacer should be washed in clean warm water with a small amount of dish washing detergent and allowed to drip dry. It's important not to rinse the bubbles off or wipe the spacer with a towel, as the residue leaves a thin coating on the inside of the spacer that reduces static electricity. Static electricity can cause the medication to stick to the sides of the spacer instead of travelling through into the mouth. A spacer should be washed before first use, then every four weeks or more often if dirty.

Meet your Pharmacists

Csilla Burt is not only one of WardMM's passionate pharmacists but also a proud mum and, as you'll read below, a very dedicated cook!

Most meaningful moment: There are so many meaningful moments working in aged care. Being able to identify medication related problems which results in an improved outcome for a resident is very fulfilling. Working as a team with care staff at facilities and sharing knowledge and ideas through education sessions is also very rewarding.

My biggest challenge: Medications increasing the risk of falls! Medication use is one of the most modifiable risk factors for falls. In aged care, optimising drug therapy for those taking multiple medications and use of medications commonly implicated in falls poses unique challenges and involves a balancing act to reduce the potential for harm but also to ensure necessary treatments are being given.

I'd be lost without…. my Thermomix – I love creating healthy gourmet meals for family and friends and never seem to run out of inspiration. I even take it camping with me!