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Nitrofurantoin Renal Restrictions Eased

Nitrofurantoin, usually prescribed as Macrobid® these days, has been the leader in generating pharmacist calls to physicians in recent years. The drug monograph and various other references claimed that the drug was ineffective when kidney function was suboptimal. Depending on the information source, Macrobid® was not to be used unless creatinine clearance (Cl_{cr}) was above 40 ml/min, 50 ml/min or even 60 ml/min. The thinking was that only healthy kidneys could concentrate the drug sufficiently in the bladder to eliminate a bacterial infection.

CMAJ published an article in late April of this year challenging this notion. Elderly female UTI patients with relatively poor renal function (median Cl_{cr} 38 ml/min) had the same percentage of treatment failures as those with good renal function. The *Beers Criteria for Potentially Inappropriate Medication Use in the Elderly* has accepted this information and reduced their renal threshold for using this drug from 60 to 30 ml/min.

Lose the Benzos

I've haven't written about the perils of benzodiazepines (BZP) for a while. We know these drugs cause confusion and falls and significantly increase mortality. They are occasionally useful for short term or PRN use, but in the majority of cases, they should be avoided. Stopping them can present special challenges. I thought I'd make a few points about the best ways to get this done, so we can reduce the use of these offensive medications.

A BZP taper should not be started until the resident's mental state (the reason for the initial prescription) is stable. If it is not, the withdrawal will likely fail as those original symptoms reemerge.

The greatest challenges exist when withdrawing BZPs from residents taking alprazolam or those with panic disorder. Alprazolam should not be reduced by more than ½ mg Q 3 days. In panic disorder, the maximum reduction should be 10% weekly.

If the resident is cognitive, explaining the benefits of discontinuation improve the odds of a successful withdrawal. Factors complicating discontinuation are long duration of treatment (particularly if use has exceeded one year) and high dosage. On the other hand, if the drug has been used for less than a month, particularly if it is a long-acting BZP (e.g. diazepam or clonazepam), it can be tapered and stopped over a one week period.

Standard tapering routines involve dose reductions of roughly 25% weekly for two weeks then lesser decreases of approximately 10% per week. A slower taper can be used in more labile residents where you have the greatest concern about failure.

Monitoring for signs of withdrawal (sweating, increased heart rate, tremor, insomnia, anxiety, agitation, nausea, hallucinations or seizures) is critical. If withdrawal symptoms emerge, the dose can be increased temporarily. Another option is to switch to an equivalent dose of a long acting BZP. For example, a resident taking lorazepam 1mg twice daily could be switched to diazepam 10mg QHS. After allowing one month to stabilize serum levels, the taper could resume.

As antipsychotic use drops, we must resist the urge to switch to BZPs. If drug use is warranted, antidepressants and cognitive enhancers are better options. Whenever possible, BZPs should be tapered appropriately and eliminated.

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