MEDICAL PHARMACIES TABLET

Drug information and news for health care providers

June 2012

DRUGS AFFECTING HYDRATION MAY AFFECT KIDNEY HEALTH

Hydration status can be a matter of life or death, particularly in elderly individuals during the summer months, who often take medications affecting the sense of thirst. An analysis of deaths during an intense heat wave in France identified several classes of medications thought to have contributed to the higher number of deaths in people aged 70 years and older. Adverse drug effects such as metabolic and gastrointestinal disturbances (e.g. nausea and vomiting) increased the risk of dehydration and hydroelectric imbalance. Further negative consequences included neuropsychiatric drug effects leading to confusion, falls and coma.

In the retrospective French study the following drugs were found to be associated with an increased risk of death in the elderly: diuretics (21), angiotensin-converting enzyme inhibitors (21), selective serotonin reuptake inhibitors (SSRIs) (11), proton pump inhibitors (9), digoxin (7), benzodiazepines (7), oral hypoglycemics (7) and angiotensin receptor blockers (5). The numbers following each class of drugs note the number of adverse drug reactions reported.

Drugs that inhibit the renin-angiotensin system are involved in blocking the perception of thirst. These "thirst blockers" may contribute to dehydration and include SSRIs, drugs affecting dopamine levels and atypical neuroleptic drugs.

Diuretics increase urinary output and increase the risk of dehydration. Other agents contributing to diuresis include caffeine and herbals such as ginseng, saw palmetto, St. John's wort and wheatgrass.

Non-steroidal anti-inflammatory drugs (NSAIDs) inhibit prostaglandins that are involved in the maintenance of normal kidney function. Normally "prostaglandins PGE2 and PGI2 cause vasodilation of the afferent arteriole to the kidney in response to transient reductions in kidney function caused by exercise, salt restriction and/or dehydration. When inhibited by NSAIDs such as ibuprofen, the absence of these prostaglandins maintains constriction of this arteriole." This may potentially lead to kidney damage in response to dehydration.

NSAIDs should not be taken prior to exercise or an endurance event to prevent muscle pain and/or damage. They are not effective for this purpose and such use may damage the kidney. If necessary, "NSAIDs should be reserved for exercise recovery and resting time periods when hydration status has normalized". When exercising, particularly in warm conditions, it is very important to maintain adequate fluid intake to prevent kidney damage. **MPT**

ALPHA-BLOCKERS INCREASE FLOPPY IRIS SYNDROME RISK

Medications that block alpha-1 receptors increase the risk of complications during cataract surgery if the ophthalmologist is not aware that the patient is taking or has EVER taken an alpha blocker. Alpha-blocking medication is associated with a significant increase in a complication of cataract surgery called "floppy iris syndrome". This complication can be prevented by using a modified surgical technique. Thus it's very important the surgeon is aware of any current or past use of drugs with alpha-blocking activity.

The muscles of the iris have alpha-1 receptors. Use of alpha-blockers can reduce the tone of the muscles that dilate the pupil of the eye. Tamsulosin is very selective for alpha-1A receptors and thus poses the highest risk of floppy iris syndrome during cataract surgery. Stopping the alpha-blocker prior to surgery does not appear to reduce the risk.

A high risk of this complication is also associated with the alpha blockers alfuzosin, doxazosin and terazosin. Other drugs with alpha-blocking activity that may pose a risk include: prazosin, silodosin, carvedilol, labetolol, most atypical antipsychotics (e.g. risperidone), mirtazapine, most phenothiazines (e.g. chlorpromazine) and tricyclic antidepressants (e.g. imipramine). **MPT**

DRUG NEWS

Resotran® (prucalopride) 1 mg & 2 mg tablets - Janssen (not currently a benefit of ODB)

Resotran is a gastrointestinal (GI) motility agent indicated in women to treat chronic idiopathic constipation where laxatives have failed. It's not approved for men due to low numbers of males in clinical trials. If not effective in the first 4 weeks Resotran should be discontinued.

Resotran is a 5-HT4 receptor agonist in the GI tract. It's similar to cisapride (Prepulsid®) and tegaserod (Zelnorm®) which were discontinued due to negative cardiac effects. Resotran is thought to be a safer version of this class of drugs because of its greater selectivity for the GI tract, although it is not entirely without cardiac effects.

Resotran should be reserved for patients with chronic constipation who are unresponsive to bowel management measures such as increasing fibre and fluids, use of laxatives, psyllium, polyethylene glycol and lactulose.

Contraindications, Precautions & Warnings

Resotran is contraindicated in patients:

- with galactose intolerance
- on dialysis
- with GI perforation, severe GI inflammation, GI obstruction and toxic megacolon/megarectum

Use caution in patients with:

- severe, unstable liver, cardiovascular, lung or neurological diseases; psychiatric illness, cancer, AIDs or endocrine disorders
- insulin-dependent diabetes
- a history of arrhythmias or ischemic heart disease
- severe renal impairment

Warnings:

- Resotran may increase the heart rate and decrease the PR interval. Patients should contact their physician if they experience severe or persistent palpitations.
- Resotran is not recommended during pregnancy or while nursing. Women of child bearing potential should use effective contraception.
- Severe diarrhea caused by the drug can reduce the efficacy of oral contraceptives.
- If patients develop severe, persistent and/or worsening abdominal symptoms, bloody diarrhea or rectal bleeding, Resotran should be stopped and a physician consulted.
- Resotran may cause fatigue and dizziness, particularly on the first day of treatment.

Drug Interactions:

- Strong p-glycoprotein inhibitors (e.g. ketoconazole, cyclosporine, quinidine, verapamil) may significantly increase Resotran levels.
- The bioavailability of digoxin may be reduced by 10%.
- Resotran increases erythromycin plasma levels by 30%.
- Resotran effectiveness may be reduced by atropine-like drugs.

Adverse Effects: Common adverse effects include headache, abdominal pain, nausea and diarrhea. They are of mild to moderate severity and usually occur on the first day of treatment and resolve in one or two days. Other common adverse effects include passing gas, enlargement of the abdomen or stomach, upset stomach, dizziness, tiredness, back pain and sinusitis.

Dose, Administration & Storage: Adult dose: 2 mg once daily. If no bowel movement occurs within 3-4 days a rescue laxative should be considered while continuing Resotran. Patients > 65 years of age should take 1 mg daily (increasing to 2 mg once daily if needed). Severe renal and/or hepatic impairment: 1 mg once daily. Resotran can be taken at anytime during the day without regard to food.

The film-coated tablets should be stored in the orginal blister in order to protect from moisture. **DN**

(Refer to the product monograph for complete information)

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References on Request
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Medical Pharmacies is pleased to announce the opening of our 35th pharmacy located at the Perley and Rideau Veterans' Health Centre in Ottawa, Ontario