Answers to your questions from medical experts

This month:

- 1. Are all PPIs created equal?
- 2. Use of Estring® for hot flashes
- 3. HBV and followup testings

1. Is there a difference between PPIs in their acid suppression effect?

Submitted by a general practitioner, Mississauga, Ontario.

As a rule, all proton pump inhibitors (PPIs) can be considered effective and safe.

Not all commercially available PPIs are created equal. For one thing, the dosage formulation can vary significantly.

The major theoretical consideration probably relates to the way these drugs are metabolized.

The major degradation pathway for the PPIs is the cytochrome P450 system, and specifically the enzymes CYP2C19 and CYP3A4. Based on one's CYP2C19 genotype, one can be either a rapid, intermediate, or slow metabolizer of PPIs. Clearly, rapid metabolizers should have less drug available for biologic effect.

The two agents which claim to exploit this heterogeneity are esomeprazole (higher dosage formulation, less influenced by CYP2C19 heterogeneity than the racemate), and rabeprazole (non-enzymatic degradation).

My approach to poor responders:

- Optimize the dose: It is seldom necessary to use more than double standard
- Ensure the drug is being taken at the right time (half hour before meals).
- Change to a different preparation (increasingly to a less CYP2C19-dependent agent).
- · Question the diagnosis, especially in the case of gastroesophageal reflux disease.

Answered by:

Dr. Jacob Louw. professor of medicine, division of gastroenterology and department of medicine, Queen's University, Kingston, Ontario.

2. A patient, 67, has been treated with premarin for 10 years for hot flashes and vaginal dryness. She experienced a iliac thrombophlebitis with pulmonary embolism, stopped premarin, and is now on Coumadin®.

The hot flashes and vaginal dryness have resurfaced. Can she be treated with Estring® (estradiol vaginal ring)?

Submitted by Dr. Eric Gagne, general practitioner, Charlevoix, Quebec.

The answer is yes, this is an excellent option.

With Estring®, the reservoir makes it possible to negate the clinically significant blood peaks associated with other preparations. Only a small peak, lasting less than one day, is observed the first day each 3 months. You may also consider Replens®.

Answered by:

Dr. Paul Bessette, an obstetriciangynecologist, oncologist, and associate professor, faculty of medicine, Sherbrooke University, Centre Hospitalier Université de Sherbrooke,



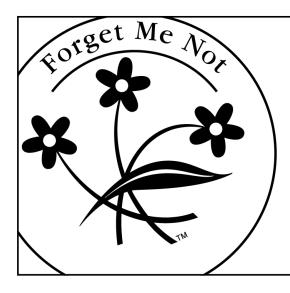
3. What is the best diagnostic test for following a hepatitis B patient? He is 21, a chronic carrier, and he wants children. He has been very active sexually, with multiple partners and no condom use.

Submitted by Dr. Dennis Glubish, general practitioner in St. Albert, Alberta. The best diagnostic test for acute hepatitis B virus (HBV) is the simultaneous presence of HBV IgM core antibody and HBV surface antigen in the setting of typical clinical and biochemical signs of acute hepatitis.

A diagnosis of prior HBV infection is best determined by looking for evidence of HBV IgG core antibody. If present, this indicates previous infection. The consequence of acute HBV infection is either resolution with resultant immunity or the development of a chronic carrier state.

In the chronic HBV carrier state, monitoring for chronic active hepatitis is best done through serial alanine aminotransferase (ALT) testing. A persistent or intermittently elevated ALT without explanation should prompt further investigations (HBV DNA and liver biopsy) to determine if antiviral therapy is indicated.

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*Canadian Study of Health and Aging

As a male, your patient poses virtually no risk of transmitting the infection to his children unless his female partner acquires infection from sexual contact. Risk of infection can be prevented by vaccination of his partner against HBV. Vertical transmission to infants most often occurs at birth through contact with a carrier mother's blood and body fluids. If the maternal carrier state is recognized in advance, infection in this setting can be averted through the immediate administration of hepatitis B

immunoglobulin (HBIG) and vaccination of the neonate following birth. This is a tremendously important issue

since vertically-transmitted HBV infection carries a higher likelihood of subsequent chronic carriage in infected individuals (~90%). Children in a household with a male HBV carrier should also be vaccinated at an early age to prevent accidental infection through contact with blood or other body fluids.

Answered by:

Dr. Gerald Evans, associate professor of medicine and microbiology and immunology, and assistant professor of pathology, and head, division of infectious diseases, Queen's University, Kingston, Ontario.



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