Answers to your questions from our medical experts

1. Hepatitis B followup

What is the current recommendation for followup on a hepatitis B carrier?

Submitted by:
Shaoli Wang, MD, CCFP
Burnaby, British Columbia

Hepatitis B virus (HBV) is a very difficult disease to manage since there are so many exceptions to rules when it comes to caring for these patients.

Perhaps the most important factor is whether or not your patient requires therapy. This should be considered whenever the liver enzymes are found to be abnormal. If this is the case, the patient should be evaluated by an individual highly experienced in HBV therapy.

If, on the other hand, you are dealing with a patient with an inactive infection (alanine aminotransferase persistently normal on several occasions), then one must continue to provide long-term followup, looking for evidence of reactivation, flare, liver decompensation or liver cancer.

Answered by:
Kelly Kaita, MD, FRCPC
Director, Viral Hepatitis Investigative Unit
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Winnipeg, Manitoba

This month's topics:

2. OCPs & pregnancy

I encountered a patient who has been on low-dose EE OCPs for six years. She presented with symptoms consistent with pregnancy and was, in fact, found to be pregnant. How likely is this and what explanation can I give her?

Submitted by:
Kamil Haider, MD
Thornhill, Ontario

No oral contraceptive pill (OCP), even when used properly, is 100% effective. In general, missing an OCP on occasion will not likely reduce its effectiveness, but with the very low-dose 20 µg ethinyl estrogen (EE) pills, there is less room for missed pills.

I still don't really understand the indication for the use of these very low-dose OCPs, but certainly, patients using them need to comply carefully with the need for daily use to maximize effectiveness.

Answered by:
Paul Claman, MD, FRCSC
Professor, University of Ottawa
Clinical director, IVF-ET Program
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The Ottawa Hospital
Ottawa, Ontario

3. Diverticulosis & diverticulitis

Could you provide current concepts regarding diagnosis of diverticulosis and diverticulitis?

Submitted by:
Noel A. Rosen, MD, CCFP, FCFP
Toronto, Ontario

Diverticulosis

The diagnosis of diverticulosis requires abdominal imaging, either radiologic or endoscopic. This is one area where an air contrast barium enema may have improved diagnostic abilities over endoscopic imaging since the diverticuli are sometimes easier to visualize radiologically. A clinical suspicion of diverticulosis is often incorrect, as many of the symptoms are not specific.

Diverticulitis

The diagnosis of diverticulitis requires an appropriate clinical presentation (typically fever, left lower quadrant pain, change in bowel movements) with abdominal imaging. Endoscopic assessment is not indicated in the setting of diverticulitis since, by definition, diverticulitis is a microperforation and the insufflation of gas (from the endoscope) has the potential to exacerbate the problem. A more appropriate investigative pattern includes either an abdominal ultrasound or, ideally, abdominal computerized tomography (CT), which may demonstrate inflammation in the area of the diverticulum.

Answered by:
Robert Enns, MD
St. Paul's Hospital
University of British Columbia
Vancouver, British Columbia

4. Tamoxifen for cancer prevention?

What is the indication for tamoxifen in preventative treatment of a close family member (*i.e.*, sister) of a breast cancer patient?

Submitted by:
Michael Lauzon, MD
Deux-Montagnes, Quebec

Chemo-prevention trials have suggested there can be a benefit to using an anti-estrogen in high-risk groups. Whether an individual who is the sister of a cancer patient should consider tamoxifen use depends on the level of risk. At risk levels > 1% per year, it is probably worth considering; however, at lower levels, side-effects, such as endometrial carcinoma and thromboembolism, make the chance of benefiting from the anti-estrogen close to the chance of developing an unwanted toxicity.

Entry into clinical trials with new agents against tamoxifen, such as the National Surgical Adjuvant Breast Project P2, is the preferred way to handle this dilemma.

Answered by:
Alexander Paterson, MD, MB, ChB, FRCP, FACP
Professor, University of Calgary
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5. Lidocaine for pain

Is there evidence for treating pain (acute or chronic) with an infusion of lidocaine? Can you offer guidelines for safe use?

Submitted by:
Andy Brockway, MD
Woodstock, Ontario

There is indeed some rationale pointing to the value of an infusion of lidocaine in the treatment of some forms of pain.

Studies involving acute pain

1. One study demonstrated that increasing painfulness during sustained pinching can be attenuated by an infusion of lidocaine, 2 mg/kg over 10 minutes, followed by an infusion of 2 mg/kg over an hour.
2. In a randomized, double-blind study, intravenous lidocaine given 30 minutes prior to incision was compared to placebo in patients undergoing major abdominal surgery. An infusion of lidocaine, 1.5 mg/kg over 10 minutes, followed by an infusion of 1.5 mg/kg/hour, resulted in less post-operative pain and lowered requirements for opioid analgesia.

Studies involving chronic pain

1. In a study of 12 patients with neuropathic pain, infusion of lidocaine, 2.5 mg/kg, reduced visual analog scale (VAS) by 34% (compared with a 22% reduction in patients who received placebo). However, patients given ketamine, 0.4 mg/kg, experienced a 54% reduction in VAS.
2. Infusions of lidocaine, ketamine and morphine were compared in a small study of patients with fibromyalgia. Both lidocaine and ketamine produced a decrease in pain during and after the infusion; however, ketamine showed a decrease in pain that persisted following the test.

The paucity of evidence makes it difficult to recommend an effective dosage for an infusion of lidocaine.

The clinical bottom line? Although ketamine has more adverse effects, it is probably a more effective agent than lidocaine.

Answered by:
Brian Goldman, MD, FACEP, MCFP(EM)
Assistant professor, University of Toronto
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Toronto, Ontario

6. Acute psychosis in the elderly

What is the current recommended approach to diagnosis and management of acute psychosis in the elderly patient confined to a long-term care facility?

Submitted by:
Noel A. Rosen, MD, CCFP, FCFP
Toronto, Ontario

Acute psychosis in the elderly should always raise a red flag in the clinician's mind. The safety of the patient, other residents and the staff must be given top priority.

An underlying medical cause of any sudden change in mental status must be sought. The most common medical causes are often related to bugs and/or drugs. Some medications that trigger acute psychosis include anticholinergics, antihistamines and benzodiazepines.

Psychiatric and psychosocial triggers must also be considered and treated optimally. All target symptoms and clusters must be documented prior to starting medication. Special note must be made if patients have any movement disorder, as they are less able to tolerate antipsychotic medication.

Antipsychotic medications may be necessary. Three of the four antipsychotics available in Canada (risperidone, olanzapine and quetiapine) are currently most frequently used for the elderly. Each may be used based on its efficacy, tolerability and safety. It is crucial to monitor patients on any drug on a regular basis and document rationale for ongoing treatment.

Answered by:
Kiran Rabheru, MD, CCFP, FRCP, ABPN
Associate professor of psychiatry
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University of Western Ontario
London, Ontario

7. Comparing ACE inhibitors

Is there a difference between the various ACE inhibitors?

Submitted by:
Tim Brandys, MD, FRCSC
Ottawa, Ontario

Angiotensin-converting enzyme (ACE) inhibitors differ in their chemical structure, onset, duration of action, metabolism route and tissue specificity.

The differences in onset and duration of action are important; the more rapid onset gives a quicker response, but is also more likely to cause side-effects. The duration of action defines how often the drug is prescribed.

Most ACE inhibitors are prodrugs. Further, most are metabolized in the liver before being excreted in the kidney, but some have a dual pathway.

The majority of ACE inhibitor effects occur at the site of the enzyme, but the agents also differ in the amount of binding to the circulating ACE enzyme.

Pharmacologically, all ACE inhibitors share the same side-effect profile.

ACE inhibitors have been shown to be effective in congestive heart failure and post-myocardial infarction. More recently, some of the ACE inhibitors have been shown effective in primary prevention when given to a population at risk for vascular disease in general.

There are no clear clinical trials showing that one ACE inhibitor is more effective than another.

So what is an overburdened clinician to conclude?

a. ACE inhibitors are effective in primary and secondary prevention of heart disease.

b. It is best to choose a short-acting ACE inhibitor and a long-acting ACE inhibitor and get to know their clinical use.

c. It is important to use the agents and the doses that have been proven in clinical trials. Often, patients are undertreated.

Answered by:
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8. Protecting against the “flu”

How many types of "flu" are currently recognized? Is there anything other than flu shot and hygiene that we should be thinking of in terms of community protection?

Submitted by:
Michael Whitaker, MD, MB, ChB
Kelowna, British Columbia

The word “flu” is understood by patients as any viral infection, respiratory or gastrointestinal. This causes problems in the acceptance of influenza vaccine as a good preventative measure and we often hear patients say, “I got the flu shot and I had the flu twice last winter!”

What patients need to be told by their family physicians is that the “flu shot” is a vaccine against the influenza virus only, and will not protect them from many other respiratory viruses, such as respiratory syncytial virus, parainfluenza, adenovirus and human metapneumovirus, all of which may produce exactly the same clinical picture in adults. There are usually three different influenza viruses that circulate each influenza season to a variable degree. These include two subtyes of A, H3N2 and H1N1, and one strain of influenza B. Usually, the vaccine is matched to these strains.

Antiviral agents that can be used to prevent infection, include:

- amantadine, which only protects against sensitive influenza A viruses;
- oseltamivir, which protects against both influenza A and B; and
- zanamivir, which also protects against influenza A and B.

The doses used for prophylaxis are oseltamivir, 75 mg orally, or zanamivir, 10 mg inhaled once daily.

Answered by:
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9. Acid suppression

Does long-term acid suppression lead to any problems with digestion/ absorption of nutrients, goods or medications as a result of the radical change in pH?

Submitted by:
A.C. Piotrowski, MD, CCFP
Fernie, British Columbia

For over 20 years, the treatment of choice for acid peptic disease has been acid suppression in the form of H_2-receptor antagonists or proton pump inhibitors (PPIs). These medications are selective and well-tolerated, with side-effect profiles similar to placebo. Investigators have attempted to address some of the theoretical concerns regarding chronic acid suppression, including:

1. ***Carcinoid formation***—Prolonged acid has not been shown to contribute to the formation of gastric carcinoids.
2. ***Gastric adenocarcinoma***—Intestinal metaplasia and gastric cancer are not documented to occur more frequently in patients on long-term PPI therapy.
3. ***Bacterial overgrowth and enteric infections***—There are increased bacterial concentrations in patients on PPI therapy. However, in an otherwise healthy population, the increased risk of enteric infections is small.
4. ***Malabsorption***—Acid suppression does not appear to alter fat absorption or mineral bioavailability. Vitamin B_{12} absorption may be decreased over extended periods in patients with profound acid suppression, but clinical deficiency of vitamin B_{12} is rarely documented.

Acid suppression may alter the absorption of certain medications or hepatic metabolism. Careful monitoring may be required in the elderly population most at risk for polypharmacy.

Overall, current evidence suggests the disruption of normal acid production in the stomach does not significantly alter the digestive and absorptive physiology of the gastrointestinal tract.

Answered by:
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Robert J. Bailey, MD, FRCPC
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Edmonton, Alberta

10. PCOS and valproic acid

What evidence exists on the relationship between PCOS and the use of valproic acid? Are there screening recommendations for women who take valproic acid?

Submitted by:
Karen Arnold, MD
Coquitlam, British Columbia

Polycystic ovary syndrome (PCOS) is more than a clinical entity; rather, it is a spectrum of endocrine abnormalities with a highly variable clinical presentation. There is no single endocrine abnormality that is either pathognomonic or universal in PCOS.

To date, there is no prospective, randomized clinical trial addressing the risk of PCOS following exposure to valproic acid (VA). At this point, data linking PCOS to VA exposure are not solid enough to stop VA when a female patient in reproductive years presents with oligomenorrhea, weight gain or obesity (*i.e.*, body mass index > 25) and/or clinical or laboratory evidence of hyperandrogenism. A referral to an endocrinologist should be considered if any of the above is brought to your attention.

Aggressive weight control should be instituted with lifestyle management, as it is possible that VA is linked to PCOS through the weight gain it induces, a side-effect that does not plateau over the years. A menstrual log book is strongly recommended, with a yearly review by a health-care professional. There is still a lot of controversy on the indication of ultrasound as a diagnostic tool for PCOS.

References available—contact *The Canadian Journal of Diagnosis* at **diagnosis@sta.ca**.

Answered by:
Maria Valois, PhD, MD, FRCPC
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11. Treating panic disorder

How long should you continue pharmacotherapy for panic disorder? Patients frequently experience a relapse of symptoms when they taper the dose. Are they having withdrawal syndrome or are they still suffering from their disorder? How do we distinguish one from the other?

Submitted by:
Stuart Glaser, MD, CCFP, FCFP
Montreal, Quebec

Panic disorder, with or without agoraphobia, is a chronic relapsing condition; hence, remission and relapse prevention are targeted treatment goals.

Pharmacotherapy is effective in remission and relapse prevention. However, panic disorder treated only with antidepressants may have a relapse rate of 80% on discontinuation of medication over a five-year period.

The combination of antidepressants with cognitive behavioural therapy (CBT) has a lower risk of relapse than pharmacotherapy alone. Approximately 75% of patients treated with CBT were able to discontinue pharmacotherapy.

The following treatment guidelines are useful for relapse prevention:

- Initiate selective serotonin reuptake inhibitor (SSRI) or venlafaxine treatment combined with CBT and psychoeducation.
- After achieving full remission for between six and 12 months, gradually taper off antidepressant and maintain CBT.
- SSRI withdrawal symptoms are rare if tapering regimen involves incremental decrease of the dose by 25% to 50% weekly to biweekly. If patient manifests withdrawal symptoms one to seven days after reduction of the dose, start again from the previous dose and prolong the tapering period.
- Full-blown panic attacks after gradual discontinuation may indicate re-emergence of panic disorder.
- Long-term antidepressant treatment (> 12 months) is required in panic disorder with comorbid recurrent depression and obsessive compulsive disorder.

Answered by:
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12. Testosterone for women

In the May 2004 issue of *The Canadian Journal of Diagnosis*, why did Dr. Kuntz state that testosterone should not be given to a woman who is not on HRT?

Submitted by:
Gary Barrs, MD
Montreal, Quebec

If you treat a post-menopausal woman who is not on hormone replacement therapy (HRT) with unopposed testosterone, there is a possibility of causing undesirable masculinizing side-effects, such as acne, hirsutism and deepening of the voice.

In the above situation, the testosterone treatment is not being counterbalanced by sufficient estrogen in the woman's system. Therefore, if a post-menopausal woman is interested in testosterone therapy to improve decreased libido (a frequent problem in the menopausal years), she must be taking estrogen therapy as well.

In premenopausal women who have endogenous ovarian estrogen production, testosterone treatment can be used if indicated. However, the use of this treatment is felt to be controversial, even if the free/bioavailable testosterone levels are below or in the low normal range. Dx

Answered by:
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