CONSULTANT'S CORNER

Practical Answers To Your Everday Questions

This month—10 Answers:

1. Selecting an antidepressant

How do you choose antidepressants?

Question submitted by:
Rose Anne Goodine, MD
Woodstock, New Brunswick

One approach is to use systematic trials. Begin with a three to four week trial of a medication from one group to its maximum recommended dose, switching to another group if there is no clinical response.

Though very effective, old antidepressants (*i.e.*, tricyclics and monoamine oxidase inhibitors) are usually considered further down the line than newer antidepressants, primarily due to adverse effects.

The newer medications can be divided into four subgroups:

1. Selective serotonin reuptake inhibitors
2. Venlafaxine
3. Moclobemide
4. Others (mirtazapine and bupropion)

Identifying target symptoms and monitoring them provides some objective information for gauging response.

If side-effects are the issue, another medication from the same group may be considered.

History of previous successful treatment in the individual or family member can be helpful.

It is important to take into consideration potential adverse effects, including discontinuation syndromes, when exploring treatment options with your patient.

Answered by:
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2. A multiparity dilemma

Does grand multiparity alone exclude a patient from delivering in a community hospital?

Question submitted by:
James Newbigging, MD
Victoria, British Columbia

Grand multiparity is not a contraindication to delivering in a community hospital.

While, grand multiparity does increase the risk of postpartum hemorrhage, to what degree is debatable. Certainly, any community hospital providing obstetrical services has the resources to deal with most situations of postpartum hemorrhage, whether it is from atony secondary to grand multiparity, long labour, very rapid labour, macrosomia, polyhydramnios, labour induction or other conditions.

The most important aspect of dealing with postpartum hemorrhage is to have a staff educated in the anticipation, recognition and management of hemorrhage following delivery.

The specific uterotonics will vary from institution to institution. Certainly, syntocinon is ubiquitous, but whether the second line is ergonovine, prostaglandin F2 alpha or misoprostol will depend upon the local situation.

The anticipation of the problem, placement of an intravenous in labour, delivery of syntocinon with the anterior shoulder, the efficient management of the third stage, the assessment of the uterus sooner rather than later and the use of vigorous massage until drugs are effective remain the standby.

I see no reason why this cannot be effectively done in the community hospital.

Answered by:
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3. Do BMI charts apply to everyone?

At what age do adult BMI charts apply?

Question submitted by:
Barbara Campbell, MD
Kingston, Ontario

In May 2000, the Centre for Disease Control (CDC), an agency of the United States Government, released new CDC growth charts, with revised versions of the growth charts developed by the National Center for Health Statistics in 1977.

There are 14 gender- and age-specific charts, which include the addition of the Body Mass Index (BMI)-for-age charts.

The BMI allows for tracking of changes in body mass, relative to others of the same sex and age in the population.

BMI has become particularly important as a means of identifying individuals at risk of obesity. The CDC recommends the BMI-for-age charts be used for all children aged two to 20 years, which have the advantage of consistency for monitoring adults and most children. They are less useful for identifying young children with undernutrition.

Answered by:
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4. Danger in the Dominican

What is the currently recommended malaria prophylaxis for travellers going to the Dominican Republic? Is it the same drug for all regions of the Dominican Republic?

Question submitted by:
Manon Belliveau, MD
Moncton, New Brunswick

Malaria is endemic in rural areas of the Dominican Republic, with the highest risk in areas bordering Haiti. Resort areas are generally not risk areas. However, occasional outbreaks of malaria transmission occur in resort areas, as recently observed in Punta Cana.

Malaria chemoprophylaxis recommendations for the Dominican Republic have always included the use of chloroquine in all rural areas, with travellers visiting resort areas generally not at risk and requiring no prophylaxis.

However, since December 2004, the Public Health Agency of Canada recommends the use of malaria chemoprophylaxis for travellers visiting resort areas in the province of La Altagracia (where Punta Cana is located).

In addition, the Agency recommends travellers taking malaria prophylaxis to also use personal insect protective measures against mosquito bites (*i.e.*, insect repellants, insecticide-treated mosquito nets, *etc.*).

While chloroquine is the malaria drug of choice for the Dominican Republic, atovaquone/proguanil, doxycycline and mefloquine are equally effective second-line choices.

Answered by:
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5. OCPs and VTE

In otherwise healthy women who wish to start OCPs, but who give a history of a first-degree relative who has had a thrombotic event, is it appropriate to test for protein C or other deficiencies before starting therapy? If so, what tests should be requested?

Question submitted by:
D. Richard, MD
Pointe-Claire, Quebec

The question is about a family history of venous thromboembolism (VTE), which may suggest your patient is at risk for having an asymptomatic inherited thrombophilia. Prescribing the combined oral contraceptive, or contraceptive pill containing estrogen (COC) to a person with an inherited thrombophilia may put her at even higher risk of VTE.

More information about the individual suffering the thrombotic event would be helpful. If this is associated with another risk factor for VTE, (*i.e.,* malignancy, trauma or prolonged immobilization) and if this patient has no other risk factors for VTE, further investigations would probably not be warranted.

If the family member has undergone investigation to diagnose an underlying thrombophilia and a specific disorder was identified, specific testing for this in your patient will be informative. If negative, she can safely be prescribed a COC.

If testing was not done or results are unavailable and the history is strongly suggestive of an underlying inherited thrombophilia, I would probably do the following inherited thrombophilia screen:

- Anti-thrombin III deficiency
- Protein C deficiency
- Protein S deficiency
- Activated protein C resistance (for factor V Leiden)
- Prothrombin gene mutation
- Factor VIII levels (inheritance unknown)
- Homocysteine levels (rarely inherited)

If positive for a thrombophilia, she should be counseled about her increased risk for VTE on the COC and nonestrogen-based contraception should be recommended.

If either thrombophilia workup is negative, but the history is strongly suggestive of an underlying thrombophilia, the patient may still be at risk of an inherited, but unidentified, thrombophilia.

Counsel her about this and include a discussion of other choices of contraception—but I would not consider this an absolute contraindication to the COC.

VTE is uncommon amongst women who use the birth control pill, although it occurs more commonly than in women who do not use the pill (relative risk of 3-5).

Other risk factors for VTE (including obesity, smoking and age over 35) should be considered when counseling any patients about these risks.

Suggested Reading:
1. Martinelli I, Battaglioli T, Mannucci PM: Pharmacogenetic aspects of the use of oral contraceptives and the risk of thrombosis. Pharmacogenetics 2003; 13(10):589-94.
2. Gelfand EV, Piazza G, Goldhaber SZ: Venous thromboembolism. Critical Pathways in Cardiolology 2002; 1(1):26-43.

Answered by:
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6. What's the best treatment for postoperative joint pain?

Is there a safer alternative than NSAIDs and coxibs for treatment of joint pain after arthroplasty?

Question submitted by:
Bernhard Toews, MD
Coquitlam, British Columbia

Pain following joint arthroplasty should be considered in two timeframes—immediately postoperative or remote from the surgery.

Attention should be given to both efficacy and side-effect profile of any treatment.

Early postoperative pain is best treated with the stronger opioid analgesics. These may be administered either by the epidural, intravenous or oral route.

Non-steroidal anti-inflammatory drugs (NSAIDs), although widely used, all carry the risk of renal side-effects, which include reduction in glomerular filtration rate, particularly in the setting of reduced blood volume, sodium retention with peripheral edema and hypertension.

Lesser known possible adverse effects, particularly attributable to the cyclooxygenase-2 inhibitors, include diminished bone formation, healing and remodeling.

Pain remote from the surgery may either be at the surgical site or in some other area. Non-pharmacologic treatments, such as education regarding reasonable goals, pacing of activities, local applications of heat or cold and muscle conditioning with exercise should always be remembered.

Local applications of topical agents, such as counter-irritants and NSAIDs, may help some patients.

Pain at an incision site may be neurogenic in quality and successfully treated with a local steroid and anesthetic infiltration. For less severe pain, acetaminophen, in adequate dose of up to 4 gm per day, can be tried, followed by a weak opioid (*i.e.*, codeine).

Some patients, however, do have a better response to the use of an NSAID. The long-term risk/benefit ratio of the stronger opioids is still unresolved.

Answered by:
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7. Flu versus physician

Is there anything the average office-based physician can do to protect themselves from the next flu pandemic?

Question submitted by:
Bill Taylor, MD
Medicine Hat, Alberta

Protection from influenza, whether it is the annual epidemic strain or a pandemic strain, is based on immunization and infection control.

In the Canadian Pandemic Influenza Plan, (**www.phac-aspc.gc.ca/cpip-clcpi/index.html**) health-care workers are identified as the first priority for influenza immunization. However, priority groups may change based on the epidemiology of the pandemic, and it is unlikely that vaccine will be available during the initial pandemic stages.

Recommendations for infection control in ambulatory-care settings are outlined in annex F; section B; part 3 of the Canadian plan.

Strict adherence to hand washing/hand antisepsis is the cornerstone to infection prevention. Additional recommendations are observance of basic hygiene measures (*i.e.*, using disposable, one-use tissues, covering nose/mouth when sneezing/coughing, *etc*.).

Wearing masks when dealing with coughing patients is recommended for the inter-pandemic years and the early pandemic phases, but may not be possible if resources are limited during the pandemic.

Answered by:
Robert Strang, MD, MHSc, FRCPC
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8. Does diabetes impact perioperative cardiac risk?

How does Type 2 diabetes impact perioperative cardiac risk in an otherwise well, middle-aged patient?

Question submitted by:
Chris Morash, MD
Ottawa, Ontario

According to the American College of Cardiology/American Heart Association guidelines for preoperative cardiovascular evaluation for noncardiac surgery, diabetes mellitus is considered an intermediate clinical predictor and diabetics with good functional capacity can generally undergo intermediate risk surgery with little likelihood of perioperative death or myocardial infarction (MI).

Patients with poor functional capacity facing higher-risk operations may be considered for further testing.

Although beta-blockers are often administered perioperatively to reduce the risk of perioperative MI and cardiovascular death, a recent large, randomized study in diabetics did not show benefit.

Another recent trial demonstrated preoperative coronary revascularization with angioplasty or coronary artery bypass did not reduce perioperative cardiovascular events.

Answered by:
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9. Kids and pneumococcal vaccine

Do you recommend pmneumococcal vaccine for unimmunized children between 2 and 5 years old?

Question submitted by:
Leonard Grbac, MD
Toronto, Ontario

Pneumococcal vaccine has been widely used for the immunization of children in the first two years of life. Immunization of these children is being paid for by a number of Canadian provinces.

The use of pneumococcal vaccine in children aged two to five has been studied in thousands of children and the vaccine has been demonstrated to be both efficacious and safe.

Currently, the Public Health Agency of Canada recommends administration of a single dose of pneumococcal conjugate vaccine to:

- all previously unimmunized healthy children between ages two and six[1] and
- administration of two doses, eight weeks apart, in children with chronic problems (*i.e.*, HIV, immune compromise or sickle cell disease).

References
1. Vaccine Preventable Diseases: http://www.phac-aspc.gc.ca/dird-dimr/vpd-mev/pneumococcal_e.html).

Answered by:
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10. TSH and the elderly

In the absence of clear symptoms of hypothyroidism, at what level of TSH elevation do you initiate thyroid hormone replacement in elderly?

Question submitted by:
Wayne Sheehan, MD
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ERRATUM

Please be advised that Consultant's Corner question #10 on TSH and the elderly in the March 2005 issue of *The Canadian Journal of CME* has been published with the wrong answer. We apologize for any inconvenience this may have caused and have included the appropriate response in this month's issue.

While screening patients without any symptoms for thyroid disease, physicians often find increased thyrotropin-stimulating hormone (TSH) levels in patients whose free thyroxine (FT4) levels are not below normal.

This state, termed as "subclinical hypothyroidism," is most commonly an early stage of hypothyroidism. Although the condition may resolve or remain unchanged, within a few years (in some patients), overt hypothyroidism may develop, with low FT4 levels, as well as a raised TSH level. The likelihood this will happen increases with greater TSH elevations and detectable antithyroid antibodies.

Subclinical hypothyroidism is caused by the same disorders of the thyroid gland as those that cause overt hypothyroidism. Chief among these is chronic autoimmune thyroiditis (Hashimoto's disease), which is commonly associated with increased titers of antithyroid antibodies, such as antithyroid microsomal antibodies (antithyroid peroxidase) and antithyroglobulin antibodies.

Indications for treatment in subclinical hypothyroidism are not established, but general guidelines can be offered.

An elevated serum thyrotropin level should be confirmed. If the serum level of FT4 is low, then the patient has overt hypothyroidism and should be treated with thyroxine. Testing for antithyroid antibodies and obtaining a lipid profile are important in subsequent decision-making.

If the results of these tests are not abnormal, there are no symptoms or goiter and the serum thyrotropin level is < 5 mU/ml, no therapy may be required, except for continued surveillance according to guidelines. Above this level of TSH, most physicians would consider treatment.

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Answered by:
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