This month—10 answers:

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1. Epinephrine and allergies

Other than peanut and penicillin allergies, which other allergies justify an epinephrine prescription?

Question submitted by:
J.V. Patidar, MD
Edmonton, Alberta

Epinephrine auto-injectors are indicated for anyone at risk of life-threatening allergic reactions, irrespective of the cause of anaphylaxis.

Organ system involvement in allergic reactions is variable, but only certain types of organ system involvement are potentially life-threatening. Involvement of the upper airways may lead to laryngeal edema causing airway obstruction by asphyxiation. Lower airway involvement may cause severe bronchospasm with impaired gas exchange. Cardiovascular involvement may manifest as hypotension due to fluid shifts, loss of vascular tone and left ventricular dysfunction.

The first-line of therapy in the management of anaphylaxis is early administation of epinephrine. Patients at risk for potentially life-threatening allergic reactions should carry epinephrine auto-injectors.

Several studies have now shown that epinephrine is most effective as a rescue medication when it is given early in the course of an anaphylactic reaction. Delays in the administration of epinephrine, especially beyond 30 minutes, are associated with a fatal outcome.

Answered by:
Peter Vadas, MD, PhD, FRCPC, FACP
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2. Anticonvulsant consultation

Can you comment on the use of antiepileptic drugs in treating migraines?

Question submitted by:
Ion Soare, MD
Toronto, Ontario

Anticonvulsants have been used in the prophylactic treatment of pain and headaches for at least 20 to 30 years. Although there is co-morbidity, a common etiology between migraine and epilepsy has never been proven and not all anticonvulsants are good anti-migraine drugs.

Valproic acid and topiramate have the best data in treating migraine, but there have been a few positive case reports and a few small, randomized trials on the use of levetiracetam, gabapentin and others.

Carbamazepine and phenytoin are not particularly helpful. Lamotrigine might be useful in preventing migraine aura.

The mechanism of action of anticonvulsants in migraine is not clear, but it might involve gamma-aminobutyric acid-mediated inhibition or blockage of sodium or calcium ion channels.

Answered by:
Lucian Sitwell, MD, FRCPC
Director
The Ottawa Hospital Headache Clinic
Ottawa, Ontario

A common etiology between migraine and epilepsy has never been proven.

3. The role of lamotrigine

What is the role of lamotrigine in the management of bipolar disorder?

Question submitted by:
Matthew Robillard, MD
Toronto, Ontario

Lamotrigine is used first-line in the treatment of bipolar disorder; several studies suggest efficacy for acute management of bipolar depression. There is evidence that it has value in maintenance therapy for prophylaxis of depression in bipolar disorder. It has not been shown to have efficacy in the treatment of mania.

Risk of treatment-emergent benign rashes (10%) or severe, potentially life-threatening rashes (one in one thousand) associated with lamotrigine may be reduced by using a slower titration rate and taking other precautions against the development of rash (avoiding sunburn, exposure to new medication, food, deodorants, detergents, *etc.*).

Answered by:
Angela Penney, MD, FRCPC
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There is evidence that lamotrigine has value in maintenance therapy for depression in bipolar disorder.

4. Duration of desmopressin for PNE

How long can you use desmopressin for primary enuresis?

Question submitted by:
Klara Klein, MD
London, Ontario

If necessary, desmopressin can be used for primary nocturnal enuresis (PNE) for several years, but it is relatively expensive. Desmopressin is not associated with long-term, adverse problems; it is used indefinitely in central diabetes insipidus.

Long-term treatment of PNE is thought more likely than short-term treatment to produce remission of enuresis, although this has been disputed.[1,2]

Studies have reported the use of desmopressin for PNE for a year or more and in other diseases and age groups for up to two years or more.[1,3-7] With long-term use, a treatment-free week every three to four months is recommended to determine whether the child has become dry.[1,8]

Alternate day desmopressin after an initial three months may decrease the cost of longer-term treatment.[9] Others have suggested combining desmopressin with a nocturnal alarm.[10]

Answered by:
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5. Vitalux® advice

Why is Vitalux® recommended for macular degeneration?

Question submitted by:
Greg Patey, MD
Kingston, Ontario

Atrophic age-related macular degeneration (AMD) accounts for approximately 85% of all patients with AMD. It is responsible for 10% to 20% of all cases of blindness caused by AMD.

The Age Related Eye Disease Study (AREDS) examined the role of micronutrient supplementation in altering the natural history of atrophic AMD. It was clearly demonstrated that high-dose antioxidants and minerals reduced the risk of progression of intermediate and unilateral advanced AMD by approximately 25% and moderate vision loss (>/- 3 lines) by approximately 19% at five years. Patients without AMD or only early AMD did not derive a benefit.

The AREDS Update II study established that lutein/zeaxanthin are associated with a decreased risk of neovascular AMD.

Vitalux AREDS, two tablets daily, matches the AREDS study dosage and does contain lutein/zeaxanthin. Ocuvite PreserVision, four tablets a day, matches the study dosage, but does not contain lutein/zeaxanthin. ICAP lutein and zeaxanthin, four tablets a day, matches the study dosage, but only has half the beta-carotene of the AREDS study.

There is a possible linkage to increased lung cancer risk in smokers who take beta-carotene. Smokers are advised to stop smoking or may wish to take Vitalux-S, two tablets a day, which does not have beta-carotene.

Answered by:
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6. Counting platelets

Should platelet counts be done regularly on warfarin-treated patients?

Question submitted by:
Len O'Neil, MD
Halifax, Nova Scotia

If warfarin is used alone and on a chronic basis, we do not recommend monitoring the platelet count in an otherwise asymptomatic patient, as thrombocytopenia has not been associated with warfarin.

Since warfarin is also used sequentially and concurrently with fractionated and unfractionated heparin for the treatment of thrombotic events, platelet counts should be monitored in these patients until the heparin has been discontinued.

If warfarin is used alone and on a chronic basis, we do not recommend monitoring the platelet count.

Answered by:
Kang Howson-Jan, MD, FRCPC
Associate Professor
University of Western Ontario
Staff Physician
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7. Testing for HIV

What tests are most appropriate to order in a patient recently exposed (1-2 weeks) to HIV?

Question submitted by:
Connie Huff, MD
Aiyansh, British Columbia

HIV tests should be polymerase chain reaction (PCR) for the amplication and detection of HIV nucleic acid in the blood (for the earliest detection of new infection) and HIV serology (which should not be positive two weeks post-exposure unless there was pre-existing infection).

Negative results mandate subsequent repeat testing, since the window period between exposure and test conversion may exceed two weeks, even with PCR.

Additional tests to rule out the co-transmission of Hepatitis B and C and sexually transmitted diseases (for sexual exposure) should also be considered.

Answered by:
Peter Akai, MD, PhD, ABIM
Specialist
Internal Medicine and Infectious Diseases
Misericordia Community Hospital & Health Centre
Edmonton, Alberta

HIV tests should be PCR for amplication and detection of HIV nucleic acid in blood and HIV serology.

8. Targeting BP

What are the target blood pressures in the frail elderly adult with hypertension?

Question submitted by:
Wayne Sheehan, MD
Rothesay, New Brunswick

In high-risk individuals (target organ damage or other left ventricular hypertrophy), pharmacologic therapy is initiated when the blood pressure (BP) is ≥ 140 mmHg systolic. For low-risk patients, medications are prescribed if the systolic BP is ≥ 160 mmHg or the diastolic BP is ≥ 100 mmHg. Target BP is < 140/90 mmHg in low-risk individuals or 130/80 mmHg in patients with diabetes mellitus or chronic renal insufficiency.

These goals may have to be adjusted upward in frail patients, particularly if they experience significant side-effects, including postural hypotension. Even a 10 mmHg reduction in systolic BP can translate into a 20% to 30% lower cardiovascular event rate.

Physicians should not forget about non-pharmacologic approaches, including moderate sodium restriction, exercise, weight loss and reduction in alcohol intake.

Answered by:
Ken Gin, MD, FRCPC
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Director
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Vancouver, British Columbia

Even a 10 mmHg reduction in systolic BP can translate into a 20% to 30% lower cardiovascular event rate.

What's a stitch?

9.

What causes a "stitch" when running?

Question submitted by:
Mark Fletcher, MD
Dartmouth, Nova Scotia

The specific cause of the abdominal pain called "side stitch" is not clearly established. Mechanical factors, such as stretching of the visceral ligaments and changes in blood flow to the viscera during exercise are possible explanations.

One study of the effect of fluid ingestion on the "side stitch" phenomenon suggests that it may be related to the mechanical effect of the fluid-filled gut on the visceral ligaments rather than to the digestive effect of specific types of fluids.[1]

Mechanical factors and changes in blood flow to the viscera during exercise are possible explanations.

Answered by:
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10. Lichen sclerosus relief

What are the best therapeutic options for lichen sclerosus of the vulva?

Question submitted by:
Charles Lynde, MD
Markham, Ontario

The aim of treating lichen sclerosus is to relieve itching, reduce inflammation and prevent further atrophy. Treatment will not reverse atrophy in advanced cases.

The current recommended treatment for vulvar lichen sclerosus is the use of potent topical steroids, such as clobetasol proprionate cream or ointment (as preferred by the patient). There are no guidelines describing the frequency or length of treatment, but it is generally applied daily for two to three months, then tapered to a maintenance frequency. Intermittent maintenance treatment (*i.e.*, three days per week or daily for three weeks per month) may reduce side-effects. Long-term followup is necessary because of a low, but possible, risk of squamous cell carcinoma.

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Answered by:
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McGill University
Staff Dermatologist
Montreal General Hospital
Montreal, Quebec

The current recommended treatment for vulvar lichen sclerosus is the use of potent topical steroids.