Experts on Call

Answers to your questions from our medical experts

1. Itch Caused by Dry Canadian Winters

What are the best ways to treat "'winter itch" caused by our dry Canadian winters?

Submitted by: M. T. Johnston, MD, Dalhousie, New Brunswick

Perhaps the simplest and most important aspect of controlling "winter itch" is enhancing the barrier function of the skin. This involves the regular application of moisturizers and, in severe cases, using diluted corticosteroid wet-wrap dressings. Emollients hydrate the skin and reduce itching. Twice daily application is recommended even in the absence of symptoms, especially after bathing or swimming. Bathing promotes hydration when followed by the application of moisturizers to the skin. Patients can also try using a humidifier in the home.

Traditional agents for treating chronic itch include topical steroids, oral antihistamines and topical menthol and camphor (0.25%). Topical measures can be helpful. Menthol (0.25%) in an aqueous cream or in a moisturizer base is often used. Menthol sensitizes thermal receptors to cold. This is a safe remedy that has been used for centuries.

For itch that is not responding to the above strategies, consider other underlying causes and referral to a dermatologist, who may try novel agents used to treat pruritus such as opioid antagonists, antidepressants, anticonvulsants and phototherapy.

Answered by: Dr. John Kraft; and Dr. Charles Lynde

2. Can PPIs Cause Leg Cramps?

Can PPIs cause leg cramps as side-effects?

Submitted by: Hany Aeta, MD, Cumberland, Ontario

PPIs have been used to treat common GI conditions such as gastroesophageal reflux disease for > 30 years. The overall experience with the use of PPIs has been favourable with very few side-effects, most frequently diarrhea, headaches, abdominal pain, dizziness and constipation occuring with an incidence rate of 1% to 3%.

From a musculoskeletal point of view, arthralgias and myalgias have been reported. Leg cramps have been observed in < 1% according to post marketing surveillance from the company monograph.

Answered by: Dr. Richmond Sy

3. What to do About Fecal Incontinence

What would you suggest to two patients who suffer from fecal incontinence; one with a normal GI work-up and another with an anal manometry which was abnormal?

Submitted by: Diane Giroux, MD, Montreal, Quebec

Fecal continence is a complex mechanism involving many factors, including bowel motility, stool consistency, rectal compliance, anorectal sensation, anal sphincter function, pelvic floor musculature and mental status. A disturbance of any of these may result in incontinence. The management of fecal incontinence should be tailored to the specific cause and often involves a variety of strategies.

In the instance where a patient has had a thorough work-up for fecal incontinence with no identifiable cause, treatment is aimed at modifying the volume, consistency and delivery of the stool. In patients with overflow incontinence secondary to fecal impaction, disimpaction is necessary and often provides an immediate cure. Treatment is then centered on maintaining more normal-formed stools. Simple measures, such as a high fiber diet and bulking agents (*e.g.*, psyllium), may be effective. Behavioural therapy, such as bowel training programs, may also be of benefit. Patients are advised to go to the toilet after every meal when the gastro-colic reflex is likely to produce a filled rectum in hopes of establishing a regular pattern of defecation. Alternatively, incontinence caused by diarrhea responds to antidiarrheal agents. These agents slow colonic transit time and decrease intestinal fluid secretion. Loperamide is most commonly used. Codeine phosphate can also be used but has more side-effects. For patients with irritable bowel syndrome, tricyclic antidepressants like amitriptyline may be helpful due to their anticholinergic properties. Biofeedback training has been studied with varying results in select patients.

In contrast, patients with an abnormal manometry have sphincter dysfunction. Manometry provides information about the resting and "squeeze" pressures of the external sphincter, the sphincter's response to rectal pressures, rectal compliance and sensation. An abnormal manometry should prompt further evaluation of the sphincters with anal ultrasonography to map any anatomic internal or external sphincter defects. Surgical repair should be considered if a well-defined defect in the sphincter apparatus is identified. If no surgically remedial lesion is identified, conservative measures (including antidiarrheal agents), are recommended. Kegel exercises can strengthen the pelvic floor muscles and external anal sphincter. Biofeedback training may be of benefit over time.

Resources
1. Wald A: Fecal Incontinence in Adults. N Engl J Med 2007; 356(16):1648-55.
2. Hinninghofen H, Enck P: Fecal Incontinence: Evaluation and Treatment. Gastroenterol Clin North Am 2003; 32(2):685-706.

Answered by: Dr. Robert Bailey; and Dr. Angela Ochs

4. Do Cortisol Levels Affect Mood and Mental Status?

How does a high level of adrenocorticotropic hormone (ACTH) and cortisol cause depression and panic?

Submitted by: Barbara Powell, MD, Kanata, Ontario

Pathological alterations in hypothalamic-pituitary-adrenal function have been associated primarily with mood disorders. Disturbances of mood are found in > 50% of patients with Cushing's syndrome (characterized by elevated cortisol concentrations) and cognitive impairments, similar to those seen in major depressive disorders. This is common and relates to the degree of hypercortisolemia present. In general, reductions in cortisol levels result in a normalization of mood and mental status.

A definitive theory of mechanism to explain how a high level of ACTH and cortisol can cause depression has not yet been reached. However, the finding that corticosteroids have multiple regulatory effects on serotoninergic function, particularly on the serotonin (5-hydroxytryptamine) subtype 1A receptor may be relevant in that regard, (*i.e.*, hypercortisolemia may lead to depression via its effect on the serotoninergic system).

Answered by: Dr. Hany Bissada

5. Treating Residual Ovarian Syndrome

What is the medical treatment of residual ovarian syndrome in a menopausal woman where analgesics have failed to give relief?

Submitted by: Pranab Debnath, MD, Yarmouth, Nova Scotia

Residual ovarian syndrome (or ovarian remnant syndrome) results from functional ovarian tissue remaining after bilateral ovariectomy most usually following a difficult hysterectomy with extensive adhesive disease of various etiologies. The residue results in pain and/or a mass. Definitive diagnosis is by confirming histological tissue identified at a subsequent surgery or may be inferred from hormonal patterns compatible with functional ovarian tissue. Surgical removal remains to be the treatment of choice but can be quite difficult.

Medical treatment is by pharmacologic suppression of ovarian function (OC agents, danazol, gonadotropin hormone releasing analogs, or progestins). The level of evidence supporting their use is not good since published papers are uncontrolled case series.

Improvement tends to occur in about half of the patients treated but generally not to the point of being symptom-free. Also, it is important to realize that there is a small risk of ovarian tumours developing in the remnant.

Resource
1. Magtibay PM, Magrina JF: Ovarian Remnant Syndrome. Clin Obstet Gynecol 2006; 49(3):526-34.

Answered by: Dr. David Cumming

6. Canadian Calcium and Vitamin D Guidelines

In Canada, what are the latest guidelines in daily dietary requirements for calcium and vitamin D?

Submitted by: Paul Stephan, MD, Scarborough, Ontario

Adults > 50-years-of-age require the equivalent of 1,500 mg of calcium q.d. This can be obtained from both diet and supplementation. Between the ages of 19 and 50 years, Osteoporosis Canada recommends 1,000 mg of calcium q.d.

With regards to vitamin D, the recommended dose is 800 IU q.d. for women ≥ 50-years-of-age. There is some new evidence that higher doses are required in northern countries with little sun exposure; however, this has not yet been adopted in Canada.

Answered by: Dr. Sabrina Fallavollita; and Dr. Michael Starr

7. ECGs Suggesting a MI

I see a lot of ECGs labelled "possible septal MI" or "Inf. M." Why is this so? What should be done about it?

Submitted by: Sajjad Chaudhry, MD, Weston, Ontario

According to the universal definition of MI from the European Society of Cardiology/American College of Cardiology Joint Committee for the Redefinition of MI,[1] a Q wave in leads V_2 to $V_3 \geq 0.02$ seconds or a Q wave ≥ 0.03 seconds in leads I, II, avL, aVF, V_4, V_5 or V_6—with Q waves present in two contiguous leads and ≥ 0.1 mV in depth—are changes highly suggestive of an established MI.

When the ECG demonstrates Q waves in leads V_1 through V_3, a confident interpretation of an anteroseptal MI can be ascertained (one must be aware that, in some cases, Q waves have etiologies unrelated to a MI). If the ECG demonstrates poor R wave progression from V_1 to V_3, the ECG may be interpreted as possible anteroseptal MI—this interpretation should be followed by a complete history and physical examination with consideration for cardiology consultation, ECHO (to search for wall motion abnormalities) and/or noninvasive stress imaging. If the ECG demonstrates a single, significant Q wave in lead III or aVF (as is often the case), no further investigation is necessary—the ECG abnormalities must be present in two contiguous leads.

Reference

1. Alpert JS, Thygesen K, Antman E, et al: Myocardial Infarction Redefined-A Consensus Document of The Joint European Society of Cardiology/American College of Cardiology Committee for the Redefinition of Myocardial Infarction. J Am Coll Cardiol 2000; 36(3):959-69.

Answered by: Dr. Igal A. Sebag

8. Appropriate Length of Time for Dialysis Treatment

Is there a time limit to the length someone can be on dialysis?

Submitted by: Michael Manjos, MD, Jordan Station, Ontario

The ultimate answer is no. There is no time limit on dialysis for anyone.

Patients > 75-years-of-age now comprise the fastest growing group of recipients.[1] A recent Canadian study showed that survival after dialysis initiation among patients aged 65 to 74 years, as well as those > 75-years-of-age improved from 1990 to 1999, despite an increasing burden of comorbidity.[2]

In the US, one in five patients with end stage renal disease is withdrawn from dialysis before death. The decision to stop dialysis was generally prompted by progressive physical deterioration. Reasons for discontinuing dialysis included:

- deterioration of chronic disease (66%),
- acute intercurrent disorder (22%),
- failure to thrive (9%),
- technical problems with dialysis (1.5%) and
- failed trial of dialysis (1.5%).

The mean survival time from the last dialysis session was 8.2 days, with half the subjects dying within six days and five patients living between 30 and 46 days. Ten debilitated subjects survived less than two days after their last treatment.[3]

There is no specific time limit for dialysis. The most important issues are:

- to have early discussions about end-of-life decisions with patients,
- for patients to make informed choices when initiating dialysis and
- to have ongoing dialogue with dialysis patients about their life goals.

References

1. Oreopoulos D, Dimkovic N: Geriatric Nephrology is Coming of Age. JASN 2003; 14(4):1099-101.
2. Jassal SV, Trpeski L, Zhu N, et al: Changes in Survival Among Elderly Patients Initiating Dialysis from 1990 to 1999. CMAJ 2007; 177(9):1033-8.
3. Cohen LM, Germain M, Poppel DM, et al: Dialysis Discontinuation and Palliative Care. Am J Kidney Dis 2000; 36(1):140-4.

Answered by: Dr. Marie Antoinette Rockx; and Dr. Manish M. Sood

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9. The Role of a Doula

Should there be a doula in every delivery room? What is the doula's role?

Submitted by: M. B. Abdurrahman, MD, Ajax, Ontario

A doula is an experienced, non-medical assistant who provides emotional, physical and informed choice support in prenatal care, childbirth and post-partum. Doulas help with the birth plan and facilitate communication with the birth team. A birth doula is a continuous support provider for labour and may offer massage and other non-medical pain relief measures.

The Canadian Society of Obstetricians and Gynecologists, as well as other obstetrical societies worldwide, support the use of a continuous labour support person because it has been shown to reduce labour duration, medications for pain relief and operative (vaginal and cesarian) deliveries. In addition, the labouring woman has greater satisfaction, more success breast feeding and the newborn is less likely to be admitted to the neonatal intensive care unit.

Resource
1. Hodnett Ed, Gates S, Hofmeyr GJ, et al: Continuous Support for Women During Childbirth. Cochrane Database Syst Rev 2007; (3):CD003766.

Answered by: Dr. Victoria Davis

10. Vaginal Estrogen: An Interference?

Does vaginal estrogen interfere with the effect of aromatase inhibitors in post-menopausal women with breast cancer?

Submitted by: Fawzi Mankal, MD, Nepean, Ontario

Estrogen replacement therapy is not routinely recommended in patients with breast cancer and it may interfere with the therapeutic effect of aromatase inhibitors.

The use of vaginal estrogen creams is associated with systemic absorption of estrogen. Justification for the use of vaginal estrogen in this setting would depend upon the symptoms for which vaginal estrogen is being recommended and the indication (adjuvant or metastatic) for use of aromatase inhibitors.

For symptoms of vaginal irritation and dyspareunia, non-hormonal water-soluble lubricants are recommended. If this is unsuccessful, the theoretical risks and potential benefits of using small amounts of topical estrogen should be discussed with the patient. When used, the lowest dose to relieve symptoms should be employed. The estradiol vaginal ring, an intravaginal estrogen device, is associated with comparably lower levels of systemic estrogen after the initial 24 hours of use. If in doubt, it should be discussed with the patient's medical oncologist.

Answered by: Dr. Sharlene Gill

11. Dealing with Elevated Thyroxine in a Young Female

If a young female is found to have elevated thyroxine (T4) what would be the next step in appropriate management?

Submitted by: Andre Behamdouni, MD, Sturgeon Falls, Ontario

This patient needs laboratory confirmation including a free T4, free triiodothyronine (T3) and thyroid-stimulating hormone (TSH) to see if they have biochemical evidence of hyperthyroidism. Most laboratories in Canada now do a free T4 and free T3 instead of a total T4. If only the T4 is available, then the TSH is required.

The total T4 may be elevated in young women on OC agents, as OC pills can increase thyroid binding globulin. In this instance, the TSH would be normal.

The TSH is the most reliable screening test for thyroid abnormalities.

Answered by: Dr. Vincent Woo

12. The Appearance of Giant Urticaria

Does giant urticaria always break out in the same area (*i.e.*, are there resident clusters of mast cells or eosinophils)?

Submitted by: Peter T. C. Lee, MD, New Glasgow, Nova Scotia

The short answer is no. Most urticarial eruptions, regardless of the cause, can affect multiple sites, even during the same outbreak. Angioneurotic edema (also called giant urticaria) is a variant of urticaria which simply means large (massive or giant) urticaria with severe swelling (edema) of the skin at a deeper level. When this involves respiratory organs such as the larynx, it may lead to suffocation and to a medical emergency.

Urticaria is often a manifestation of histamine release, but other inflammatory mechanisms exist, involving different pathways leading to various forms of hiving (*e.g.*, acute urticaria of an IgE mediated allergy vs. a viral or drug-induced urticarial vasculitis). In an unpredictive manner, patients may have variable, or repeating patterns of reactivity to allergens or infections (*e.g.*, some children who are allergic to milk may respond with a predominant GI reaction to cow's milk, while others will exhibit multisystemic signs, such as wheezing and/or hives). We also find that patients with classic features of allergic rhinitis who are skin test negative may exhibit local nasal mucosal sensitization (specific IgE to the aeroallergen), with no evidence of its presence in the skin. Therefore, although uncommon, it is conceivable that the concept of local sensitization may occur in other tissues, including the skin (an example is the fixed drug eruption, which is a local skin manifestation of a drug allergy, typically reappearing in the same location).

Answered by: Dr. Tom Gerstner

13. Risk of Deep Vein Thrombosis After Surgery

How long post-operatively is a person at risk of having a deep vein thrombosis (DVT) following surgery?

Submitted by: David Hawkins, MD, Kelowna, British Columbia

The risk for venous thromboembolism (VT) following surgery depends upon the type of surgery and subsequent immobilization as well as patient-related factors, including the presence of infection, dehydration, malignancy, obesity, increased age, prior DVT, estrogen use and hypercoagulable state.

The highest risk group includes patients with multiple risk factors, as well as those undergoing hip or knee arthroplasty or hip fracture surgery and those with major trauma or spinal cord injuries. Without prophylaxis, the risk of proximal VT and fatal pulmonary embolism in this group is 10% to 20% and 0.2% to 5%, respectively.

Although DVT prophylaxis is commonly discontinued at hospital discharge, there is an ongoing risk of DVT up to three months following high-risk surgery, such as total hip replacement. Current American College of Chest Physicians recommendations are that patients undergoing total hip replacement or hip fracture surgery receive thromboprophylaxis with low molecular weight heparins, fondaparinux or warfarin (INR 2.0 to 3.0) for 28 to 35 days post-operatively.

Resource
1. Geerts WH, Pineo GF, Heit JA, et al: Prevention of Venous Thromboembolism. Chest 2004; 126(3 Suppl):338S-400S.

Answered by: Dr. Bibiana Cujec

14. Burning in the Glans Penis

Four months since a sexual encounter, a previously healthy male has a persistent burning sensation in his glans penis. STDs and swabs were negative. What is the cause? What can be done to help?

Submitted by: C. Littlejohn, MD, Burlington, Ontario

Burning sensation after a sexual encounter, especially if it was unprotected sex and extra marital, is a common problem. If STDs have been ruled out, *Ureaplasma urealyticum* should be excluded. Finally, a cystoscopy should be done to evaluate the urethra and look for a urethral stenosis.

If all the investigations come back negative, the patient should be reassured that this condition is benign. Also, anti-inflammatory drugs or pyridium can be tried to relieve the symptom.

Burning sensation after a sexual encounter, especially if it was unprotected sex and extra marital, is a common problem.

Answered by: Dr. Hugues Widmer

15. Is There a Correlation Between Post-Menopausal Bleeding and Myomas?

What is the correlation between post-menopausal bleeding and uterine myomas?

Submitted by: Alexander Voros, MD, Portage La Prairie, Manitoba

Fibroids, particularly submucous fibroids, have been associated with abnormal uterine bleeding in the reproductive years, but a list of causes of post-menopausal bleeding would generally not include myomas. Despite a general acceptance, there is scant evidence that fibroids that do not impinge on the uterine cavity are important causes of bleeding, even in the reproductive years. Fibroids are generally assumed to regress in post-menopausal women. Malignant transformation into leiomyosarcomas, though very rare, should be suspected in post-menopausal women with rapidly-growing solid myometrial lesions and appropriate management instituted.

The major objective in managing abnormal uterine bleeding in post-menopausal women is the exclusion of malignancy or premalignant conditions of the genital tract, particularly of the cervix and endometrium, through:

- imaging with ultrasound,
- direct visualization including hysteroscopy,
- tissue sampling by biopsy of visible lesions, or
- endometrial biopsy.

It might also be considered reasonable to ensure that the bleeding is from the genital tract rather than from the bladder or the GI tract. This can be a problem particularly in advanced age.

In the absence of malignant or premalignant change of ovaries, tubes, endometrium, cervix, vagina or vulva, management has usually been conservative unless the bleeding is recurrent, in which case a hysterectomy and bilateral salpingo-oophorectomy is frequently advised.

Fibroids, particularly submucous fibroids, have been associated with abnormal uterine bleeding in the reproductive years, but a list of causes of post-menopausal bleeding would generally not include myomas.

Clearly, fibroids do not cause malignancy of the genital tract or ovaries. The presence of a submucous fibroid could contribute to bleeding and anecdotal evidence suggests that aromatase inhibitors can control the bleeding. Transcervical removal of a submucous fibroid would seem reasonable but in the absence of persistent bleeding or unusual growth of a fibroid, extirpative surgery is not reasonable.

Answered by: Dr. David Cumming

16. Post-Infectious Cough

How long after a viral illness should one suspect post-infectious cough? How should post-infectious cough be treated?

Submitted by: Steve Choi, MD, Oakville, Ontario

Cough lasting between three and eight weeks following an acute upper respiratory tract infection is often referred to as post-infectious cough. Clinical assessment, including a chest radiograph, may be necessary to rule out other causes of chronic cough, such as asthma, upper airway cough syndrome or pneumonia. Other diagnoses should be sought if cough persists for longer than eight weeks. Post-infectious cough is thought to be due to airway inflammation with epithelial disruption, often associated with bronchial hyperresponsiveness. Cough may also cause or exacerbate pre-existing gastroesophageal reflux due to the increase in intra-abdominal pressures.

There is no role for antibiotics in the treatment of post-infectious cough except in the early phase of *Bordetella pertussis* infection. Inhaled ipratropium bromide may attenuate post-infectious cough. Inhaled corticosteroids may be considered, although evidence is lacking for their benefit in this setting. Antitussive medications may also be tried. The majority of cases of post-infectious cough are self-limited and require no treatment.

Resource
1. Braman SS: Postinfectious Cough. ACCP Evidence-Based Clinical Practice Guidelines. Chest 2006; 129(1 Suppl):138S-146S.

Answered by: Dr. Paul Hernandez

17. Switching a Diabetic to Insulin

What are some strategies for switching Type 2 diabetics, who are poorly-controlled on oral agents and are non-compliant, to insulin?

Submitted by: Sharon McCutcheon, MD, Sussex, New Brunswick

There are multiple barriers to insulin initiation in patients with Type 2 diabetes, including:

- fear of needles,
- fear of hypoglycemia and
- weight gain, *etc*.

Often, patients will be more accepting if only a single dose of insulin is given. A single bedtime injection of an intermediate-acting insulin or long-acting insulin analogue with concomitant oral agents will often achieve glycemic control targets as well as limit weight gain.

Inhaled insulin is another option and in patients with Type 2 diabetes, insulin may be inhaled with each main meal. Inhaled insulin has a rapid onset similar to subcutaneously-given short-acting insulin analogues and lasts similar to regular subcutaneous insulin.

Answered by: Dr. Vincent Woo

18. Altered Taste Sensation and Chemotherapy

What can be done about altered taste sensation during (and after receiving) chemotherapy?

Submitted by: George Linn Iii, MD, Kingston, Ontario

Alteration in taste is not uncommon after chemotherapy and/or radiotherapy. This may be exacerbated by xerostomia; therefore, dry mouth should be managed appropriately with stimulation of salivary flow using sugarless chewing gum or sugarless hard candy and the use of saliva substitutes. Oral infections or candidiasis can also result in altered taste and should be treated promptly.

Patients who have completed chemotherapy may be reassured that their altered sensation of taste is typically reversible and is expected to improve over time.

Answered by: Dr. Sharlene Gill

19. Candidate for Second-Line Osteoporosis Therapy

What is the recommended management for a patient taking alendronate, calcium and vitamin D and whose dual energy x-ray absorptiometry scan shows continued excessive bone mass loss, despite this therapy?

Submitted by: Pol Morton, MD, Baldur, Manitoba

This patient would be a candidate for what could be considered second-line therapy. In the 2002 guidelines for the management of osteoporosis (OP), some second-line agents mentioned include raloxifene, hormonal therapy and calcitonin; however, since the publication of these guidelines, there have been newer agents that are now more widely used.

The new 2006 Canadian guidelines for the use of parathyroid hormone (PTH) recommend it be used as first-line in the setting of severe OP (*i.e.*, low BMD with vertebral compression fractures), or as a second-line agent in patients with persistent fractures on a bisphosphonate. PTH use is recommended for a period of 18 months and should be followed by the use of antiresorptive therapy.

In the setting of worsening BMD and no new fractures, when PTH would not necessarily be indicated, an IV bisphosphonate may be an option. Zoledronic acid has been shown to be superior to placebo in patients with severe OP and although there are no head-to-head trials, it also appears to be superior to oral bisphosphonates. The other advantage of zoledronic acid is increased compliance as it is given as a yearly infusion.

Resources

1. Hodsman A, Scientific Advisory Council of Osteoporosis Canada, Papaioannou A, et al: Clinical Practice Guidelines for the Use of Parathyroid Hormone in the Treatment of Osteoporosis. CMAJ 2006; 175(1):48.
2. Black DM, Delmas PD, Eastell R, et al: Once-Yearly Zoledronic Acid for Treatment of Postmenopausal Osteoporosis. N Engl J Med 2007; 356(18):1809-22.

Answered by: Dr. Sabrina Fallavollita; and Dr. Michael Starr

20. Investigation/Treatment for Hair Loss

In addition to the more common male pattern balding (*e.g.*, thinning and breakage, *etc.)*, can you provide a reasonable investigation/treatment approach to hair loss?

Submitted by: Dr. Katherine Abel, MD, Leduc, Alberta

Hair loss is a comprehensive topic to which many textbooks are devoted. The major fork in the road is the distinction between scarring vs. non-scarring alopecia.

In non-scarring alopecia, hair follicles are visible; whereas, in scarring alopecia, one sees only scarred scalp with the absence of follicles. Scarring alopecia is the result of permanent injury to the stem cell region of the hair follicle (Table 1). Hair growth is permanently impaired.

Table 1

Causes of scarring alopecia

Developmental/hereditary disorders
- Aplasia cutis congenita
- Epidermal nevi
- Romberg's syndrome
- Generalized follicular hamartoma

Primary causes
- Group 1: Lymphocytic
  - Discoid lupus erythematosus
  - Lichen planopilaris
  - Classic pseudopelade
- Group 2: Neutrophilic
  - Folliculitis decalvans
- Group 3: Mixed
  - Acne keloidalis nuchae

Secondary causes
- Neoplasms (*i.e.*, BCC, SCC, lymphomas and metastatic tumours)
- Infectious agents:
  - Bacterial (*i.e.*, post-cellulitis)
  - Fungal (*i.e.*, tinea capitis)
- Physical agents:
  - Mechanical trauma
  - Caustic chemicals
  - Burns
  - Radiotherapy

BCC: Basal cell carcinoma SCC: Squamous cell carcinoma

For non-scarring alopecia, consider alopecia areata, trichotillomania, telogen effluvium, androgenic alopecia, tinea capitis, traction alopecia, or chemically-induced alopecia (*i.e.*, hair relaxers).

Though no routine investigations are necessary (Table 2), consider an association with other autoimmune diseases, a complete blood count, measuring thyroid-stimulating hormone, thyroid auto-antibodies, serum ferritin levels and serum B12.

Treatment is based on the underlying condition for most cases (*e.g.*, immunosuppressive therapy for alopecia areata).

Answered by: Dr. John Kraft; and Dr. Charles Lynde

Table 2

Approach to patient with hair loss

History/physical
- Factors associated with onset (*i.e.*, trauma)
- Use of hair practices (*i.e.*, hot curling irons, close shaving)
- Duration (*i.e.*, developmental)
- Presence of other lesions (*i.e.*, lichen planus)
- Symptoms of collagen/vascular disease (*i.e.*, lupus)
- History of neoplasm

Investigations
- Scalp biopsy (*i.e.*, pseudopelade, lupus, neoplasm)
- As indicated:
  - Cultures
  - Bacterial and fungal if clinically indicated
  - Blood test (*i.e.*, antinuclear antibody)

21. Triptans for Migraines

Are triptans for migraines contraindicated in patients taking SSRIs?

Submitted by: Jane Brunton, MD, Waterdown, Ontario

The strong association of migraine with both depression and anxiety should be considered in the treatment of individuals with migraine. Many of these patients are already on a selective-serotonin reuptake inhibitor (SSRI) for the treatment of their depression.

Triptans (*e.g.*, sumatriptan and zolmitriptan) are serotonin agonists proven to be effective orally in the reduction of migraine headaches. However, giving a serotonin agonist to a patient already on a SSRI may trigger a serotonin syndrome. Accordingly, it is prudent to avoid prescribing triptans to a patient with a migraine headache who is already on a SSRI.

Resource
1. Chapter 2.11 Neuropsychiatric Aspects of Headache. In: Dadock BJ, Kaplan HI, Sadock VA (eds.): *Kaplan and Sadock's Comprehensive Textbook of Psychiatry*. Eighth Edition. Lippincott Williams & Wilkins, Philadelphia, Pennsylvania, 2004, p. 486.

Answered by: Dr. Hany Bissada

22. Use of Cytobrush in Early Pregnancy

Is there any evidence to restrict the use of the cytobrush in early pregnancy?

Submitted by: Greg Baran, MD, Kingston, Ontario

There are two methods to collect Pap smears:

- the traditional method involving the Ayers spatula,
- cytobrush (for the endocervix) and slide and
- the more recent liquid-based cytology method with a cervix-examination brush.

The manufacturers of cytobrush recommend it not be used after 10 weeks of pregnancy. However, based on the evidence, the cytobrush with spatula is more likely to obtain sufficient endocervical cells without adverse consequence to the mother or the fetus, though it is associated with higher rates of bleeding than the cervix-examination brush. Current evidence does not support the superiority of the cytobrush and spatula for any patient-oriented outcomes. If using the cytobrush, the patient should be informed that there may be some bleeding from the cervix which will not harm the pregnancy.

Resources
1. Martin-Hirsch P, Jarvis G, Kitchener H, et al: Collection Devices for Obtaining Cervical Cytology Samples. Cochrane Database Syst Rev 2000; (2):CD001036.
2. Paraiso MF, Brady K, Helmchen R, et al: Evaluation of the Endocervical Cytobrush and Cervex-Brush in Pregnant Women. Obstet Gynecol 1994; 84(4):539-43.

Answered by: Dr. Victoria Davis

23. Beneficial Exercise Levels for HDL-C

How much exercise do you need to raise your HDL-C in coronary artery disease?

Submitted by: Dr. Dominic Eustace, MD, Saskatoon, Saskatchewan

Exercise has beneficial effects on many vascular risk factors, including hypertension, diabetes and dyslipidemia. The magnitude of the effect on HDL-C varies depending on the intensity and duration of the exercise program and whether weight loss is achieved as well as individual variables. Aerobic exercise programs in patients with CVD can increase HDL-C by 9%.[1] There is a graded benefit of exercise. A carefully performed prospective study showed a significant increase in HDL-C only in patients engaged in a high amount of high intensity exercises (*i.e.*, jogging 32 km/week at 65% to 80% peak oxygen consumption).[2]

The American Heart Association guidelines recommend at least 30 minutes of moderate intensity aerobic physical activity, such as brisk walking, that increases the heart rate on at least five days per week.[3] This may not be enough exercise to significantly increase HDL-C. Total cholesterol/HDL-C ratio should be monitored on at least an annual basis in patients with coronary artery disease to ensure that it is < 4.0 on the combination of statin and exercise. Some patients will require the addition of niacin to achieve this goal.

References
1. Kelley GA, Kelley KS, Franklin B: Aerobic Exercise and Lipids and Lipoproteins in Patients with Cardiovascular Disease: A Meta-Analysis of Randomized Controlled Clinical Trials. J Cardiopulm Rehabil 2006; 26(3):131-9.
2. Kraus WE, Houmard JA, Duscha BD, et al: Effects of the Amount and Intensity of Exercise on Plasma Lipoproteins. N Engl J Med 2002; 347(19):1483-92.
3. Thompson PD, Buchner D, Piña IL, et al: Exercise and Physical Activity in the Prevention and Treatment of Atherosclerotic Cardiovascular Disease: A Statement From the Council on Clinical Cardiology (Subcommittee on Exercise, Rehabilitation, and Prevention) and the Council on Nutrition, Physical Activity, and Metabolism (Subcommittee on Physical Activity). Circulation 2003; 107(24):3109-16.

Answered by: Dr. Bibiana Cujec

24. Treating Warts in the Urethral Meatus

What is the best treatment of warts in the urethral meatus of males?

Submitted by: Dr. Richard Hsu, MD, Langley, British Columbia

First, a complete examination of the genitals and a cystoscopy should be performed to rule out other external or urethral condylomas. Such warts may be treated under local anesthesia with laser or cauterization. Imiquimod (immune stimulator) is a topical cream that can be used both to prevent recurrences and also to treat genital warts when they are not too bulky. It can be applied locally on or in the meatus with a cotton swab. It is efficient, but costly and extra care should be made to clear all healthy areas of the skin. Close follow-up is mandatory after the treatment of genital warts because recurrences are frequent.

Answered by: Dr. Hugues Widmer

25. How Often to Screen with a 24-Hour Urine Protein?

Once proteinuria is established with microalbuminuria and a 24-hour urine protein and treatment is started with ARBs, how often should additional 24-hour urine proteins be followed?

Submitted by: Dr. Chris Cunningham, MD, Vernon, British Columbia

The goal of treating proteinuria with an ACE inhibitor or ARB is to achieve < 500 mg q.d. and monitoring should occur every six months.

Twenty-four-hour urine collections, although the gold standard, are time-consuming for patients and are often inaccurate because of difficulties with obtaining the collection. The urinary protein/creatinine ratio can overcome these limitations.

The 2003 National Kidney Foundation recommends the use of a spot urine albumin-to-creatinine ratio. Annually screen if the patient has any of the following:

- diabetes,
- hypertension, or
- a family history of chronic kidney disease.

If detection of microalbuminuria is persistent (two of three measurements are greater than the reference range), treat and retest within six months. If treatment has resulted in a significant reduction of microalbuminuria, annual testing is recommended. If no reduction in microalbuminuria has occurred, BP and lipid levels should be re-evaluated. Ensure that an ACE inhibitor or ARB is part of the antihypertensive therapy.[1]

Our recommendation is to obtain a 24-hour protein AND a baseline spot urine protein/creatinine ratio initially to assess for proteinuria. If present, initiate therapy with an ACE inhibitor or ARB. The urinary protein/creatinine ratio may provide a more convenient measurement and a more accurate specimen for follow-up monitoring purposes. Measurements should be taken every six months with the target being proteinuria < 500 mg q.d. Dx

Reference

1. Eknoyan G, Hostetter T, Bakris GL, et al: Proteinuria and Other Markers of Chronic Kidney Disease: A Position Statement of the National Kidney Foundation (NKF) and the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). Am J Kidney Dis 2003; 42(4):617-22.

Answered by: Dr. Marie Antoinette Rockx; and Dr. Manish M. Sood

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