1. Dignostic criteria for rheumatoid arthritis

What are the diagnostic criteria for rheumatoid arthritis?

Question submitted by:
Dr. Lorry Bobyn
Kelowna, British Columbia

Diagnostic criteria in the rheumatic diseases have been developed primarily for the purpose of identifying homogenous patient populations for research. Criteria may be used to help towards a diagnosis in an individual patient, but should not be obligatory.

Rheumatoid arthritis (RA) is characterized by symmetrical polyarthritis involving at least three joints, mostly of the hand, lasting for at least six weeks and is associated with:

- prolonged stiffness,
- a positive rheumatoid factor,
- rheumatoid nodules and
- bony erosions on radiographs.

Four of the seven criteria should be present for a definite diagnosis.

Answered by:
Dr. Mary-Ann Fitzcharles

2. Colonoscopy miss rates

How often does a colonoscopy miss lesions?

Question submitted by:
Dr. Carl Rosenstock
Edmonton, Alberta

Colonoscopy is the current gold standard for the detection of colonic polyps and malignancies. However, the sensitivity for detecting lesions is not 100%.

The miss rate of colonoscopies depends on the size of the lesion. For polyps ≥ to 1 cm, the rate is 2%. For lesions between 5 mm and 10 mm, the miss rate is 13%. Twenty-six per cent of lesions between 1 mm and 5 mm in diameter are missed. In general, the larger the polyp, the more likely it is to be clinically relevant. Therefore, although colonoscopy has a relatively high miss rate for small polyps, these are very unlikely to harbor malignancy or even to progress.

Answered by:
Dr. Mark R. Borgaonkar

Want to know more about thyroid disease? Read about it in this month's Case In... (pg.27)

Monitoring thyroid patients

3.

When monitoring hypothyroid patients, if the TSH is low and free T4 is within the normal range, should we reduce the dose, leave it the same or use clinical judgement?

Question submitted by:
Dr. Adam Steacie
Brockville, Ontario

The thyroid stimulating hormone (TSH) level is an excellent indicator of the adequacy of thyroid hormone replacement in primary hypothyroidism (PH). One could even argue about the need to measure the free T4 level in following patients with PH. A low TSH indicates excessive thyroxine replacement and usually requires a reduction in dosage. Clinical judgment is obviously important, as I would not change the dose based on a single TSH level, which is minimally below normal in an otherwise stable patient. If the TSH is persistently or significantly low, reduction in dosage is advised to prevent the risks associated with iatrogenic thyrotoxicosis. In contrast to PH, patients with secondary hypothyroidism, due to hypothalamic/pituitary disease, should have their free T4 levels monitored and changes in the dose of thyroxine should not be made on the TSH level.

Answered by:
Dr. Hasnain Khandwala

Are ARBs contraindicated in patients with angioedema?

4.

In patients who have developed angioedema with ACE inhibitors, are ARBs contraindicated?

Question submitted by:
Dr. M.I. Ravallia
Twillingate, Newfoundland

Previous studies suggested that half of the patients with angiotensin receptor blockers (ARBs)-induced angioedema had experienced (angiotensin-converting enzyme (ACE) inhibitor-induced angioedema; therefore, ARBs have been traditionally avoided.[1] However, a recent retrospective study involving 64 patients with ACE inhibitor-induced angioedema helped to clarify the use of ARBs as an alternative agent. Only two of these patients had persistent angioedema once switched to an ARB.[2] ACE inhibitors are known to decrease the metabolism of bradykinins, whereas ARBs selectively block the angiotensin type 1 receptor and are not known to directly affect bradykinin.[1]

Although the majority of patients will tolerate an ARB, there is still a small risk of angioedema; therefore, a risk-benefit assessment is still warranted. If treatment is required for proteinuric nephropathy, or heart failure, or resistant hypertension, an ARB would be a good alternative to an ACE inhibitor with close monitoring.

Answered by:
Dr. Chi-Ming Chow
Nancy Rebellato (MScPhm)

References
1. Dykewicz MS: Cough and angioedema from angiotensin-converting enzyme inhibitors: New insights into mechanisms and management. Curr Opin Allergy Clin Immunol 2004; 4(4): 267-70.
2. Cicardi M, Zingale LC, Bergamaschini L, et al: Angioedema associated with angiotensin-converting enzyme inhibitor use: Outcome after switching to a different treatment. Arch Intern Med 2004; 164(8):910-3.

Eye malignancies

5. What is the most common eye malignancy?

Question submitted by:
Dr. Ken Seaman
North Bay, Ontario

Uveal melanoma is the most common eye malignancy, accounting for up to 70% of all primary ocular malignancies in the Caucasian population. However, according to the World Health Organization and the International Agency for Research on Cancer, ocular melanoma is uncommon, with an age standardized incidence between 0.4 cases and 1.2 cases per 100,000 within Europe and 0.1 cases to 2.3 cases worldwide. Most reports show that there has been little change in incidence over the past 30 years.

Lesions in the iris form about 10% of ocular melanomas, they usually have low-grade malignancy and they have a good prognosis. Because of their location in the anterior segment, they are much more readily seen on routine evaluation and therefore, early diagnosis is more likely.

Melanomas occurring in the choroid or ciliary body have a much poorer long-term prognosis and haematogenous spread leads to late metastases, even when the primary tumour has been removed, either by enucleation or it has been deactivated by one of many forms of focused radiation.

There have been huge studies undertaken to determine the risk factors for uveal melanoma. These range from genetic factors to exposure to various chemicals, including heavy metals, UV light and carcinogens released by industry. Of all the studied compounds, only alicyclic halogens were positively associated with ocular melanoma, but the figures were so small, it was not considered statistically significant.

The predilection for haematogenous spread of uveal melanoma to the liver has led, in the past, to the use of one-eyed patients with hepatomegaly for final medical exams.

The median survival of patients developing liver metastases from ocular melanoma is only 5 months to 7 months, compared with 18 months for other sites of metastatic spread. Despite newer forms of treatment, including chemo embolization, there has been little improvement in this survival rate for many years.

Indirect ophthalmoscopy by an experienced observer through a dilated pupil remains the gold standard for diagnosing ocular tumours of all types. New technology, such as widefield scanning retinal photography, could make a significant impact in the future. The danger, as always with these technologies, is that they will induce complacency in ophthalmologists and optometrists who might rely too much on digital images at the expense of performing adequate funduscopy.

Answered by:
Dr. Malcolm Banks

Hemorrhoid management

6.

What is the best advice for recurrent hemorrhoid management?

Question submitted by:
Dr. Alan Russell
Leamington, Manitoba

Hemorrhoids can cause symptoms, such as painless bleeding or itching. Thrombosed hemorrhoids present with acute pain and are best treated with surgical excision (hemorrhoidectomy).

Hemorrhoids can initially be treated with conservative measures, such as adequate fluid intake and topical corticosteroids. Bulk laxatives, especially in constipated patients, may also be helpful. If these approaches fail, then hemorrhoid ablation, usually with rubber band ligation, should be considered.

Hemorrhoidectomy has a greater success rate than ligation, but it has a higher complication rate, particularly anal canal stenosis and incontinence of stool and flatus. For this reason, hemorrhoids refractory to conservative therapy are typically treated with ligation, reserving hemorrhoidectomy for ligation failures.

Answered by:
Dr. Mark Borgaonkar

The failure rate of the morning-after pill

7.

What are the failure rates of the morning-after pill at 24 hours, 48 hours and 72 hours?

Question submitted by:
Dr. Danaze Chambers
Banff, Alberta

For more on the morning-after pill? Turn to question #10 (pg.47)

A two-dose course of levonorgestrel, 750 µg, prevented:

- 95% of pregnancies when given in the first 24 hours after intercourse,
- 85% of pregnancies when given 25 hours to 48 hours after intercourse and
- 58% of pregnancies if given 48 hours to 72 hours after intercourse.

Overall, its' effectiveness is estimated at 89% if used within the recommended 72 hours after sexual intercourse has taken place. Note that this does not mean an 11% pregnancy rate but rather 89% of pregnancies that would have occurred without emergency contraception are prevented. There is also evidence that the efficacy of the morning-after pill extends beyond 72 hours to 120 hours, with a slight decrease in efficacy.

Answered by:
Dr. Susan Chamberlain

8. Diagnosing polymyalgia rheumatica

What level of CRP increase should we look for in order to help diagnose PMR?

Question submitted by:
Dr. Najmi Nazerali
Montreal, Quebec

Both C-reactive protein (CRP) and the erythrocyte sedimentation rate (ESR) are measurements of inflammatory response. In polymyalgia rheumatica (PMR), any elevation of CRP beyond the normal range may be a more reliable indicator of inflammation than the ESR. PMR is primarily a clinical diagnosis and the presence of inflammatory markers should be used to help consolidate the clinical impression. Limb girdle pain and prominent stiffness in a patient over the age of 50 should always suggest this diagnosis. However, acute-phase response measurements, such as CRP and ESR may be normal in up to 25% of patients and therefore a normal value should not preclude this diagnosis.

Answered by:
Dr. Mary-Ann Fitzcharles

9. Elevated CRP & CHD

Is elevated CRP a risk factor for CHD?

Question submitted by:
Dr. Pin Li
Calgary, Alberta

C-reactive protein (CRP) is considered as one of the emerging cardiac risk factors. A large body of well-done observational cohort studies demonstrates an association between CRP levels and risk of future coronary heart disease (CHD) events. However, there are uncertainties in the exact role CRP plays in the pathogenesis of CHD and the reliability of CRP assessment. At present, there is no scientific evidence that CRP measurement used to assess CHD risk results in improved patient outcomes. If CRP measurement was used in the screening and treatment of patients, it should be used in conjunction with an overall assessment of patients' CHD risk.[1]

Answered by:
Dr. Chi-Ming Chow

Reference
1. Pearson TA, Mensah GA, Alexander RW, et al: Markers of inflammation and cardiovascular disease: Application to clinical and public health practice: A statement for healthcare professionals from the Centers for Disease Control and Prevention and the American Heart Association. Circulation 2003; 107(3):499.

10. OC pills and the morning-after pill

Is it safe to use the morning-after pill in patients who just started an OC within the last four weeks or in patients who have missed more than three tablets of their OC in the previous month?

Question submitted by:
Dr. Katherine Reynolds
Victoria, British Columbia

If a patient starts the OC pill within the first five days of the start of her menstrual period, there is no need for back-up contraception (condoms). If a patient starts her pills after the first week of her period, back-up contraception is recommended for the first seven days of taking the pill.

If a patient misses more than two consecutive pills in the same month, then it is safe to use emergency contraception (*i.e.,* the morning after pill) but it must be started within 72 hours of unprotected intercourse for the expected efficacy.

For patients who are new at taking pills everyday, I advise patients to use back-up contraception for the first month until daily pill-taking becomes routine.

Answered by:
Dr. Susan Chamberlain

11. Fever in an infant

When should a parent see a doctor about a fever in an infant?

Question submitted by:
Dr. Steve Sullivan
Victoria, British Columbia

Fever in an infant is typically a sign of infection and the degree of concern is, to some extent, dependent on the age of the infant, as well as on the infant's overall condition. A caveat to be borne in mind is that parents are not typically very good at detecting fever without using a thermometer and that overall fever is probably over-called. In general, infant fever generates more anxiety than mordibity. However, any fever in an infant under three months of age should be taken seriously and certainly, any irregular temperature in an infant < two months of age merits a careful workup and often emperical therapy for putative sepsis with close monitoring. For older infants, fever should be considered in light of the overall clinical evaluation.

Many infants with self-limited viral infections will have a fever, but will have an otherwise unremarkable examination and merit no further workup. If the infant is unusually irritable, very withdrawn or not interacting with their environment and parents, a more detailed assessment is needed. The one test that is useful in febrile infants—albeit with a low yield—is a urinalysis to ensure that the fever is not an occult urinary tract infection.

Answered by:
Dr. Michael Rieder

Receiving a second dose of the MMR vaccine

12.

Should all young adults who have received the measles, mumps and rubella vaccine (MMR) only once, be immunized a second time?

Question submitted by:
Dr. Gayle Garber
Conception Bay South, Newfoundland

Routine immunization is recommended for all adults born after 1970, without evidence of previous infection. In theory, routine immunization means two doses, at least four weeks apart, after the age of one year. In practice, if only one dose was received after the age of one year, a second dose is offered primarily to those at high-risk. Individuals who are at high-risk include:

- travellers to a measles-endemic area,
- health care workers,
- students at post-secondary institutions,
- military recruits and
- adults who are aware that they were never immunized.

The second dose can be a measles vaccine alone, although recent outbreaks of mumps suggest that a second dose using MMR may be preferable.

Answered by:
Dr. Michael Libman

Smoking and fibromyalgia

13.

All of my fibromyalgia patients are smoking; could there be a link?

Question submitted by:
Dr. Jean-Marc Noiseux
Dawson Creek, British Columbia

A single study has specifically addressed the question of smoking and fibromyalgia (FM).[1] Smoking was present in about 20% of FM patients and was correlated with more pain and global severity of symptoms. However, in this particular study, there was no comment regarding the psychological status of the FM patient.

FM patients have an increased prevalence of lifetime psychological distress, such as depression and anxiety, factors which are associated with a habit phenomenon such as smoking. Although some studies have reported a link between smoking and an inflammatory disease, such as rheumatoid arthritis, FM should not be considered an inflammatory illness, but rather it should be considered a dysregulation of pain-processing mechanisms in the nervous system.

Answered by:
Dr. Mary-Ann Fitzcharles

Reference

1. Yunus MB, Arslan S, Aldag JC: Relationship between fibromyalgia features and smoking. Scand J Rheumatol 2002; 31(5):301-5.

Want to know more about fibromyalgia? Read about it in this month's article Fibromyalgia: Where to Begin? (pg.81)

Chronic nose bleeds

14.

An otherwise healthy 23-year-old suffers from chronic nose bleeds. Causes? Treatment? Can this be a symptom of something more serious?

Question submitted by:
Dr. Edwin Chandler
Vancouver, British Columbia

Epistaxis is classified on the basis of the primary bleeding site as anterior or posterior.

Causes of epistaxis include:

- local trauma (*i.e.,* nose picking),
- facial trauma,
- foreign bodies,
- nasal or sinus infections and
- iatrogenic factors, such as nasogastric and nasotracheal intubation.

Furthermore, oral anticoagulants and coagulopathy, due to thrombocytopenia, platelet disorders, or AIDS-related conditions may predispose an individual to epistaxis.

Epistaxis is more common in hypertensive patients and patients are more likely to be acutely hypertensive during an episode of epistaxis. Vascular abnormalities that contribute to epistaxis may include the following:

- sclerotic vessels,
- hereditary hemorrhagic telangiectasia (Osler-Weber-Rendu syndrome),
- arteriovenous malformation,
- septal perforation and/or
- deviation.

Other possible causes of epistaxis are:

- chemical irritants,
- hepatic failure,
- leukemia,
- rhinitis,
- thrombocytopenia,
- heparin toxicity and
- tumors.

In terms of treatment, patients with significant hemorrhage should receive an intravenous line and crystalloid infusion, as well as continuous cardiac monitoring and pulse oximetry. If a bleeding point is easily identified, cauterization with silver nitrate is used. If attempts to control hemorrhage with pressure or cautery fail, the nose should be packed. Options include:

- Traditional (Vaseline gauze) packing
- Compressed sponge (*i.e.,* Merocel®)
- Epistaxis balloons (anterior or posterior)

Epistaxis that requires posterior packing should be managed in cooperation with an otolaryngologist (ear, nose and throat specialist). Because of multiple possible complications, admission is required, usually in a monitored setting. Very severe epistasis can also be managed by embolization.

Answered by:
Dr. Ted Tewfik

Treatment of cutaneous larva migrans

15.

What is the the current best treatment for cutaneous larva migrans?

Question submitted by:
Dr. H. Zacharias
Morden, Manitoba

This is an infection caused by various types of parasites, such as hookworms that burrow into exposed skin. This is often encountered after walking in sand on tropical and subtropical beaches. Treatment options include:

- aggressive cryotherapy,
- watchful waiting—the infection is self-limited, but is usually very itchy, which makes this a somewhat difficult option and
- thiabendazole (the most commonly prescribed agent).

Topical application of thiabendazole is used for early, localized lesions. However, oral administration of thiabendazole is preferred for widespread lesions or unsuccessful topical treatment. Other effective alternative treatments include albendazole and mebendazole. All these agents can be difficult to find and often involve significant GI side-effects, such as nausea and diarrhea. In the US, ivermectin is proving to be a good oral agent in treating cutaneous larva migrans.

Answered by:
Dr. Scott Murray

Non-retractile foreskin in children

16.

At what age should we initiate topical steroids in boys with foreskin that does not retract? There is certainly different answers depending on whether I ask a pediatrician or a urologist. Please discuss.

Question submitted by:
Dr. A. Therrien
Gananoque, Ontario

Non-retractile foreskin in children is usually a normal variant that declines in incidence with time and usually does not require therapy. On the other hand, phimosis often does requires treatment. The use of topical steroids in children for treatment of phimosis is somewhat controversial. This diagnosis has been known to be made when, in fact, the patient has tight foreskin, but not actual phimosis. A fully retractile foreskin is only expected in 50% of 10-year-olds and it is not until young men are 18 years of age that 98% to 99% will have fully retractile foreskins. In the case of true phimosis, often diagnosed during adolescence, use of a topical steroid cream has been demonstrated to be the most cost-effective therapy.

Answered by:
Dr. Michael Rieder

Anemia in the elderly

17. Anemia in people over 80-years-old. Workup, treatment, *etc.*?

Question submitted by:
Dr. Claude Roberge
Sherbrooke, Quebec

For more on anemia, turn to this month's article Anemias in the Elderly (pg. 75)

The investigation and treatment will rely completely on the specific type of anemia. Anemia can be classified into three major groups:

1) Microcytic hypochromic (mean cell volume [MCV] < 70 fL)
2) Normocytic normochromic (MCV 70 fl to 100 fL)
3) Macrocytic anemia (MCV >100 fL)

Common causes of anemia include:

- blood loss,
- bone marrow dysfunction or neoplasia (such as myelodysplastic syndrome and primary or secondary malignancy), or
- deficiency of supplement (*i.e.,* iron, folate, or B12 vitamin).

Systemic diseases also need to be excluded. These include:

- liver,
- kidney and
- GI

Answered by:

Dr. Kang Howson-Jan
Dr. Kamilia Rizkalla

The relationship between food and eczema

18. Is there a relationship between food and eczema?

Question submitted by:
Dr. I. D'Souza
Willowdale, Ontario

The relationship between food allergies and eczema is an area of considerable controversy. The immunologic mechanisms causing atopic dermatitis or eczema are mixed with both an immediate and delayed hypersensitivity component. Prick testing may give information regarding the immediate hypersensitivity (*i.e.,* IgE-mediated component), whereas patch testing with foods will be a better correlate of delayed hypersensitivity. While there is no consensus within either the allergy or dermatology communities regarding the contribution of food allergies to the worsening of eczema, there is reasonably good evidence implicating several foods in contributing to eczema in about 30% to 50% of children.

These foods include:

- peanut,
- tree nut,
- egg,
- milk,
- fish,
- shellfish,
- wheat and
- soy.

Withdrawal of the offending food from the diet in those individuals will lead to improvement in that subset of patients and reintroduction will cause worsening of the eczema. Because elimination diets can be cumbersome and difficult, evaluation by a specialist with experience in this area will better help to identify those most likely to benefit from a change in diet.

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Answered by:

Dr. Peter Vadas