Coumadin Therapy for Atrial Fibrilation Diagnosis

1.

How would you start coumadin therapy in an elderly women with newly diagnosed atrial fibrilation? Would you advise her to start her ASA right away?

Question submitted by:
Dr. John D Shins
Ottawa, Ontario

The European Society of Cardiology (ESC) has recently updated its guidelines for the management of AF and has incorporated the new Birmingham 2009 schema (known by the acronym CHA2DS2-VASc) for the prediction of stroke risk. The schema is similar to the CHADS2, but gives two points for being over the age of 75-years or olderand, one point for being age between 65 to 74 years of age, one point for vascular disease (prior myocardial infarction, peripheral artery disease, or aortic plaque), and one point for female sex.

The ESC recommends that the widely used and easily remembered CHADS2 be applied first; only if the score is under two, should the new schema be applied to further grade risk of stroke in patients at low risk. The degree of risk can be refined, and if any of the additional risk factors embodied in the CHA2DS2-VASc are present, the score will be increased and may influence the physician to choose more potent antithrombotic management. Conversely, if the score remains at 0, the patient is clearly at very low risk of stroke and may not require any antithrombotic agent. The ESC recommends that a patient with a score of zero according to the CHA2DS2-VASc schema should receive either aspirin or no antithrombotic therapy, with the latter preferred; a patient with a score of one should receive either aspirin or OAC, with the latter preferred; and a patient with a score of two should receive OAC. This new schema may eventually be useful for patient management, but for the present, the Canadian Cardiovascular Society (CCS) recommends ongoing use of the CHADS2 schema.

Hence, for anyone older than 75-years-of-age (especially elderly women) with atrial fibrillation, putting the patient on dabigitran or Coumadin should be considered as a treatment option.

Answered by:
Dr. Chi-Ming Chow

Reference:
1. Gage BF, van Walraven C, Pearce L, et al. Selecting Patients with Atrial Fibrillation for Anticoagulation: Stroke Risk Stratification in Patients Taking Aspirin. Circulation 2004;110:2287-92.
2. Camm AJ, Kirchof P, Lip GYH, et al. Task Force for the Management of Atrial Fibrillation of the European Society of Cardiology (ESC). Guidelines for the management of Atrial fibrillation. Eur Heart J 2010;31:2369-429.
3. Cairns JA, et al. CCS AtrialFibrillation Guidelines Committee. Canadian Cardiovascular Society Atrial Fibrillation Guidelines 2010: Prevention of Stroke and Systemic Thromboembolism in Atrial Fibrillation and Flutter. Can J Cardiol. 2011 Jan-Feb;27(1):74-90.

Bleeding Risks of NSAIDs Post Surgery

2.

Please comment on the bleeding risks of NSAIDs when they are used post surgery.

Question submitted by:
Dr. Robert Dickson
Hamilton, Ontario

Postoperative bleeding is increased for many different reasons. Patient factors such as old age, comorbidities, including liver or kidney disease, and invasive lines increase this risk. The type of surgery, such as, neurosurgery or surgery in opthalmology, carries added risks of permanent neurologic damage or loss of vision in the case of hemorrhage. Thus, use of anti-platelet agents and anticoagulants should be used judiciously. In most cases, where hemostasis has been achieved, patients may begin their usual doses of aspirin and NSAIDs the following day. Keep in mind that aspirin may pose more of an issue, because of its irreversible inhibition of platelet function. If aspirin or NSAIDs are used as analgesia, often an alternative, more potent analgesia, such as narcotics, may be used postoperatively at the discretion of the treating physician for a short period of time. Thus, where possible, non-NSAID analgesia should be considered first. When the patient is well enough to be discharged home, he/she is usually not at further risk of major bleeding and can resume his/her usual aspirin or NSAID.

Answered by:
Dr. Dr. Cyrus Hsia and
Dr. Kang Howson-Jan

Antidepressants with the Least Sexual Side-effects

3.

Which antidepressant causes the least sexual side-effects?

Question submitted by:
Dr. M. Gagliardi Sidney, British Columbia

Sexual dysfunction is one of the most common side-effects associated with antidepressants. It is also considered to be one of the most bothersome and frequently leads to non-adherence or discontinuation of the antidepressant. Consequently, there have been many randomized, double-blind studies that compared different antidepressant agents to determine which ones have the most sexual side-effects. The findings of such studies have consistently demonstrated that SSRIs (Selective Serotonin Reuptake Inhibitors) have significantly higher rates of causing sexual dysfunction. Depending on the literature, the frequency of a patient having this side effect, which may include delayed ejaculation, anorgasmia or impotence, may be in the range of 30%. Studies have also shown that duloxetine has similar rates of sexual dysfunction to those seen with the SSRIs, although few studies have been conducted with venlafaxine. However, one randomized, controlled trial found rates of sexual dysfunction associated with venlafaxine to be similar to those observed with the SSRIs. Studies involving mirtazapine have been mixed, with some reporting lower rates of sexual dysfunction compared to the SSRIs and others demonstrating no significant difference.

Bupropion XL is a norepinephrine-dopamine reuptake inhibitor (NDRI), which has the least adverse effects on patients' sexuality. For patients that do not have a seizure history or a contraindication to the medication, this would be my first-line recommendation.

Resource
1. Papakostas GI. The Efficacy, Tolerability, and Safety of Contemporary Antidepressants. J Clin Psychiatry. 2010;(71, suppl) E1:e03.

Answered by:
Professor Lamoure
Contributor:
Asst. Professor Jessica Stovel

Is "Bitterness in Mouth" Related to GERD?

4.

A patient complains of "bitterness in mouth," especially upon awakening. Is this related to gastroesophageal reflux disease (GERD)?

Question submitted by:
Dr. C. Littlejohn Burlington, Ontario

Nighttime gastroesophageal reflux disease (GERD) can be defined as nocturnal awakening by GERD like symptoms. This includes nocturnal awakening caused by coughing or choking, regurgitation of fluid or food, and acidic/bitter taste in the mouth. These symptoms may be present upon awakening and/or noted in the supine position.

Answered by:
Dr. Jerry S. McGrath

Is the Zoster Vaccine Following Shingles Beneficial?

5.

If an older person has recently had shingles, is there any point in giving them the new "zoster" vaccine?

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

In theory, an episode of shingles should boost the natural varicella zoster virus (VZV) immune response at least as well as the zoster vaccine. So, in theory, the vaccine would not provide, much or any, additional protection, at least for some time after the illness. Unfortunately, there is no data which confirms this, nor is there any data which gives some guidance as to the time frame of waning of immunologic protection.

In general, it is thought that intermittent exposure to cases of chickenpox could also boost immunity. Thus, ironically, with the near disappearance of chickenpox thanks to the "chickenpox" version of the vaccine, such stimulation now occurs quite rarely. This might lead to a gradually increasing incidence of shingles, as immunity fades due to insufficient natural boosting and increased usefulness of the "zoster" form of the vaccine. In summary, I would probably not give the zoster vaccine soon after an episode of shingles, but might give it if a few years have gone by since the episode.

Answered by:
Dr. Michael Libman

Is There Any Therapy for Chilblains?

6.

Is there any therapy for Chilblains?

Question submitted by:
Dr. Jane Purvis
Peterborough, Ontario

Chilblains can be quite painful and persistent. They are an injury induced by exposure to cold. Therefore, behaviour has to be tailored to avoid exposure to cold, damp environments. Smoking should be stopped, as nicotine acts as a vasoconstrictive agent. In terms of active therapy, slow rewarming can help, as well as vasodilators such as calcium channel blockers. Nifedipine and diltiazem have been used with some success. There have been some reports of low molecular weight dextran infusion being helpful in severe, painful cases.

Answered by:
Dr. Scott Murray

Combination of Oral Medications for Diabetic Patients

7.

In a diabetic patient, what combination of oral medications can be used if the patient refuses insulin?

Question submitted by:
Dr. Mario Malizia
London, Ontatio

Currently, there are several different classes of oral hypoglycemic agents available, which have different mechanisms of action. Generally, most of the agents are indicated for use in mono or dual therapy, but we often use them off-label in our practice in triple or even four-drug combinations. As long as the medication has a different mechanism of action, it can potentially be used in combination. I have used a combination of metformin, sulphonylurea, Thiazolidinediones (TZD), DPP4 inhibitors, and alpha-glucosidase inhibitors like glucobay, all in combination for one patient.

Some combinations to avoid include using sulphonylureas, like glyburide and gliclazide with magletinides, as as their mechanism of action is comparable. Similarly, using a DPP4 inhibitor is not recommended in a patient who is on a GLP1 analog. We obviously would not use two medications from the same class, such as using glyburide,and gliclazide in combination. In a patient who refuses insulin, I often find it helpful to explain to them that the oral agents will only work if there is some amount of endogenous insulin available. Furthermore, if they have had diabetes for a long duration, and do not have much capacity for insulin secretion, it is very unlikely that any combination of oral agents will achieve good glycemic control.

Answered by:
Dr. Hasnain Khandwala

Sensitivity of Urine and Serum Protein Electrophoresis Testing

8.

What is the sensitivity and specificity of urine and serum protein electrophoresis in the diagnosis of multiple myeloma?

Question submitted by:
Dr. Corinne McKernon
Calgary, Alberta

Urine and serum protein electrophoresis have a role for detecting a monoclonal protein band in an individual. The sensitivity is increased with the use of immunofixation electrophoresis. Typically, the urine protein electrophoresis is more sensitive for light chain production. It is important to note, however, that identifying a monoclonal protein (called the M-band or M-protein) is not synonymous with multiple myeloma. Numerous disorders have this, including monoclonal gammopathy of undetermined significance (MGUS), smoldering myeloma, multiple myeloma, primary amyloidosis, Waldenstrom's macroglobulinemia, and other lymphoproliferative disorders.

Answered by:
Dr. Cyrus Hsia and
Dr. Kang Howson-Jan

Bochdaleck Hernia Treatment

9.

What is the treatment, if any, for a bochdaleck hernia?

Question submitted by:
Dr. J. Molson
Kingston, Ontario

A Bochdaleck hernia is one of the two variants of congenital diaphragmatic hernia, the other being Morgagni's hernia. Blochdalek hernias are posterolateral and are by far the most common type of diaphragmatic hernia, with Morgagni (anterior) hernias accounting for only 5% of all diaphragmatic hernias. Blochdalek hernias, which are most commonly left-sided, are characterized by a defect in the posterolateral region of the diaphragm, allowing abdominal contents to enter the chest cavity. This condition develops during intra-uterine life, and involves the above-noted defect in development of the diaphragm followed by intrusion of abdominal contents into the chest, which can then lead to pulmonary hypoplasia, with pulmonary hypoplasia being a major determinant of outcome. Diagnosis can be made during the intra-uterine period and interventions, such as, foetal surgery, can be undertaken; the goal is to reduce the impact of the hernia on lung development. Definitive therapy is surgical repair of the defect with vigorous respiratory and medical support. Bochdalek hernias have a high mortality rate, which has been quoted as being between 40 and 60%. In these cases, mortality was related to pulmonary hypoplasia and the presence of other congenital anomalies.

An infant who has the intra-uterine diagnosis of suspected Bochdalek hernia or who has been diagnosed post-natally with Bochdalek hernia, should be managed in a centre with sub-speciality expertise in neonatology, paediatric surgery, and paediatric critical care.

Answered by:
Dr. Michael Rieder

Genetic/hereditary Component to Pemphigus?

10.

Is there any genetic/hereditary component to pemphigus?

Question submitted by:
Dr. Laura McConnell
Mississauga, Ontario

Pemphigus can be related to genetic factors. There have been cases of dominant patterns of inheritance in some families. There seems to be a link to some major histocompatibilty (MHC) class II molecules (DR4 and DRw6).

Answered by:
Dr. Scott Murray

When to Prescribe Antidepressants for Depressed Mood

11. When are antidepressants indicated in patients with depressed mood?

Question submitted by:
Dr. Paul Steinberg
Vancouver, British Columbia

A bio-psycho-social approach should be used when determining whether a patient with a depressed mood requires an antidepressant. From a biological perspective, a diagnosis of major depressive episode (MDE) can be made if the patient exhibits:

1. A depressed mood and/or lack of interest or pleasures (anhedonia) occurring almost every day for at least two weeks time

2. Four of the following additional symptoms:

    a. Changes in sleep, appetite, weight, and psychomotor activity

    b. Decreased energy or fatigue

    c. Thoughts of guilt or feelings of worthlessness

    d. Poor concentration and thinking, or indecisiveness

    e. Recurrent thoughts of death or suicidal ideation plan, or attempt

In some circumstances, a "wait-and-see" approach could be taken with the presence of these symptoms alone. Physicians should look for physical explanations for such symptoms (*e.g.*, hypothyroidism), or other medications that a patient may be taking (*e.g.*; beta-blockers). However, in addition to such a biologic assessment, the physician should also assess the patient from a psycho-social perspective. Is there a clear impairment in general and social functioning? Are the symptoms impacting the patient's ability to carry out work or school-related activities? If in combination with the biological symptoms there is such an impairment, an antidepressant will likely be of value to the patient and is indicated.

This work-up is critical to determine if there is a psycho-social stressor (Axis 4) that the patient may have such as a change in relationship or employment or secondary to a grief or loss reaction. Medications must be considered as only part of the therapeutic treatment plan, and it is interesting to note that the placebo effect with antidepressants is about 25 to 30%. So the involvement of the work up of the physician with the patient being able to voice their sadness or methylenedioxyethylamphetamine (MDE) symptoms is part of the therapeutic alliance and treatment option. Cognitive behavioral therapy (CBT) or self-help groups may also be of assistance in tandem with medications.

When an antidepressant is started, it is critical to ensure the medication is used at a proper dose for 8 to 12 weeks to be certain of an adequate trial. It is also important that the patient is monitored for signs and symptoms of activation, including suicidal thoughts and suicidal tendencies in persons aged 13 to 25.

Answered by:
Professor Lamoure
Contributor:
Asst Professor Jessica Stovel

Significance of Positive Antigliadin Antibody for Celiac Screening

12. What is the significance of positive antigliadin antibody for celiac screening if the anti-tissue transglutaminase test is negative?

Question submitted by:
Dr. Heidi Carlson
Moncton, Newbrunswick

Gliadin is a component of the wheat storage protein gluten. Antigliadin antibody levels are frequently elevated in untreated celiac disease and are thus, a diagnostic aid. This test has a moderate sensitivity and specificity; the IgA based tissue transglutaminase is superior. The positive predictive value for antigliadin antibodies corrected for the expected prevalence in the general population was greater than 2%.[1] A high titer of antigliadin antibody is more specific for celiac disease, but some normal individuals have high serum levels of antigliadin antibody.

If a patient has a positive antigliadin antibody and a negative anti-TTG, but your suspicion of celiac disease is high, an endoscopy and small bowel biopsy should be carried out. A small bowel biopsy is the gold -standard for the diagnosis of celiac disease. For screening purposes, I check anti-TTG and IgA levels. It has been recommended that IgA be checked in addition to anti-TTG, because celiac patients may have an unknown IgA deficiency, resulting in a false negative anti-TTG.

Reference
1. Corrao, et al. Serological Screening of Coeliac Disease: Choosing the Optimal Procedure According to Various Prevalence Values. Gut 1994 Jun;35(6):771-5.

Answered by:
Dr. Jerry S. McGrath

Effectiveness of SSRIs in the Treatment of Depression

13.

Are SSRIs effective for depression?

Question submitted by:
Dr. Charles Lynde
Markham, Ontario

Selective serotonin reuptake inhibitors (SSRIs) bind to the 5-HT transporter and inhibit the reuptake of serotonin. This, in turn, increases serotonin activity within the neuronal synapse such that more serotonin is available to bind to the postsynaptic receptor. As serotonin has been shown to be a critical neurotransmitter in the neurobiology of depression, the SSRIs have been considered first-line treatment for uncomplicated Major Depressive Disorder (MDD). When examining the differences between specific SSRI agents, there has been evidence to suggest that one SSRI is more efficacious than another.

While SSRIs are viewed as the first-line therapy for depression, a Cochrane Review found that with respect to efficacy, there was no clinically significant difference between the SSRIs and tricyclic antidepressants (TCAs). However, SSRIs are considered the preferred agent due to poor tolerability associated with the TCAs and low therapeutic index and margin of safety in overdose. Although the review indicates equal efficacy, as clinicians we know that when selecting of an SSRI ,considering the Axis 2 of the patient can often make a difference. An excellent example would be selection of sertraline where anxiety co-exists.

When compared with venlafaxine (a Serotonin-Norepinephrine Reuptake Inhibitor), a meta-analysis reported a 7% advantage in depression response rates for venlafaxine treatment in comparison to an SSRI. However, while the consensus of these studies suggests greater efficacy with venlafaxine compared to the SSRIs, the clinical relevance of this observed difference has yet to be established.

Resources
1. Geddes JR, Freemantle N, Mason J, et al. Selective Serotonin Reuptake Inhibitors (SSRIs) for Depression: Cochrane Review. The Cochrane Library.2003:1
2. Papakostas GI. The Efficacy, Tolerability, and Safety of Contemporary Antidepressants. J Clin Psychiatry. 2010;(71, suppl) E1:e03.

Answered by:
Professor Lamoure
Contributor:
Asst. Professor Jessica Stovel

Syringoma Treatment

14.

What is the treatment for syringoma?

Question submitted by:
Anonymous

Syringomas are benign growths that are differentiated along eccrine lines. They are usually found under the lower eyelid. Treatment is aimed at destroying the lesions, either by cryotherapy, electrocautery, surgical excision, or trichlorocetic acid. Laser therapy with carbon dioxide resurfacing or Nd: Yag have been successful as well.

Answered by:
Dr. Scott Murray

Non Tender Breast Nodule in a Baby Girl who is Not Nursing

15.

A 10-month-old girl, who is not nursing, has a nodule mobile (non tender) in her left breast. What could it be, and what follow-up should be offered?

Question submitted by:
Dr. Valerie Guilbeault
Gatineau, Quebec

A non tender mobile nodule in the breast of an infant is almost always benign, and is typically the breast bud. Relative breast hypertrophy at birth is quite common and is usually attributed to the influence of maternal hormones. As such, hypertrophy declines over the weeks and months after birth, although stimulation (as with repeated attempts to express fluid) can lead to persistence for months beyond the expected time for resolution. Typically, follow-up is all that is required, with the proviso that frequent daily manipulation of a breast bud may lead to persistence beyond the usual time for spontaneous resolution.

Although rare, lymphangiomas or haemangiomas can present with unilateral breast enlargement. This is usually apparent clinically, for example with cutaneous evidence of a haemangioma. If there is doubt, an ultrasound can usually resolve the issue. As well, benign unilateral breast enlargement has been described in association with therapy using cimetidine. Breast enlargement can occur in the context of precious puberty, but this is typically bilateral and is accompanied by other signs of precocious puberty such as adrenarche.

Answered by:
Dr. Michael Rieder

Is an Ultrasound Worthwhile for Polycystic Ovary Syndrome?

16.

Should I do an ultrasound (US) on all patients I suspect to have Polycystic Ovary Syndrome (PCOS)?

Question submitted by:
Dr. Jeff Hogan
Kingston, Ontario

Polycystic ovary syndrome (PCOS) refers to a condition of ovulatory dysfunction and hyperandrogenism, at the exclusion of other disorders accounting for these problems. Traditionally it was considered to be associated with polycystic ovaries (PCO). Since 1986, the diagnostic criteria for PCOS have been revised, taking into account the variations for the presenting signs and symptoms. In 1990, the NIH suggested the diagnosis not include an ultrasound (US) finding of PCO. In 2003, the Rotterdam criteria revised the definition to include two of abnormal ovulation, clinical or biochemical signs of hyperandrogenism, or PCO on US, to the exclusion of other etiologies. More recently, the Androgen Excess Society proposed diagnostic criteria to include evidence of androgen excess and ovarian dysfunction identified by oligo-anovulation or PCO on US, again to the exclusion of other causes. The need for US is controversial as asymptomatic women may have findings of PCO on US, and women with PCOS signs and symptoms may have normal ovaries on US. Thus, an US may not be needed for diagnosis in patients suspected of PCOS. It is nonetheless useful in investigating causes for irregular ovulation and hyperandrogenism and should be done for this reason.

Answered by:
Dr. Cathy Popadiuk

The New HPV Vaccine

17.

Is the new HPV vaccine really safe? There have been reports of severe adverse reactions.

Question submitted by:
Dr. Brian Hadley
Belleville, Ontario

There have, of course, been reports of various severe adverse reactions to the HPV vaccine, including death and syndromes such as Guillain-Barre. In general, causality has not been established in these cases, although some have had significant play in the popular media. This is a very simple non-living vaccine. Essentially, it is just the HPV L1 capsid antigen. It is hard to imagine how some of these severe and complicated events could be pathophysiologically related to the vaccine, but it is conceivable that some people react badly to one or more epitopes of this protein. Even if some of these severe events are linked to the vaccine, they remain extremely rare, and the vaccine remains among the safest ones we have. At this time, there seems to be little doubt that the HPV vaccine prevents far more death and disability than it might cause.

Answered by:
Dr. Michael Libman

How to Encourage Patients to Increase their HDL

18.

How can I encourage my patients to increase their high-density lipoprotein (HDL)?

Question submitted by:
Dr. Jeff Hogan
Kingston, Ontario

A low, high-density lipoprotein (HDL) is associated with an increased risk of coronary artery disease. As you are aware, it is somewhat difficult to increase either with ot without pharmacotherapy. The goals of treating patients with low HDL have not been firmly established, and although clinical trials suggest that raising HDL will reduce cardiovascular risk, the current available evidence is not sufficient to specify a particular drug regimen. The primary target is the LDL, and this should be treated before treating the low HDL. Dietary modification, increase in physical activity, smoking cessation will have a positive effect on HDL. Pharmacotherapy for increasing HDL usually involves fibrates and niacin. Fenofibrate may increase the HDL up to 15% and niacin will increase it by 30 to 40%. The combination of niacin and gemfibrozil has been shown to raise HDL by as much as 45%. Though statins are typically used to treat elevated LDL, some studies have demonstrated a HDL raising effect, by up to 10%, with statins such as rosuvastatin.

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Answered by:
Dr. Hasnain Khandwala