Consultant's

Practical Answers To Your Everyday

Indications for Clopidogrel and ASA Use

1.

What are the indications for combination use of clopidogrel and ASA 81 mg in patients with coronary artery disease and atrial fibrillation?

Question submitted by:
Dr. T. Petraglia
Montreal, Québec

The issue of antiplatlet and anticoagulation treatment is rather controversial for patients who have suffered from a heart attack and who have concomitant atrial fibrillation and who are at moderate or high risk of thromboembolism.[1] Study treatments for the ACTIVE W trial was discontinued due to a significant difference in efficacy, in favour of the standard oral anticoagulation (OAC) over antiplatelet therapy (clopidogrel plus aspirin).[2] The current evidence does not support the routine use of warfarin in combination with ASA due in part to unproven applicability to current practice.[3] None of the trials evaluated warfarin therapy in combination with aspirin and clopidogrel, which is now given to many post-MI patients, including all patients undergoing percutaneous coronary intervention with stenting.

The combination use of ASA, clopidogrel, and warfarin should be individualized. Each patient should be assessed individually for their thromboembolic risk versus bleeding risk. It is also important to know if the patient received stenting and the types of stent that the patient gets (drug-eluting vs. bare metal).

References

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Answered by:
Dr. Chi-Ming Chow

Reusable Plastic Cutlery

2.

Can plastic forks and spoons be washed and reused or are they a bacterial trap?

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

There is nothing inherently difficult about properly cleaning plastic cutlery. Soap and water will remove bacteria with more or less the same efficiency from metal, plastic, or other smooth surfaces. Hot water and disinfectants such as bleach will equally kill residual bacteria effectively on any of these surfaces. The only issue is that plastic tends to discolour and break more easily. Also, the very hot water used in dishwashers is often able to partially melt these types of plastics. It may be easier for organic debris to be trapped on the surface when these utensils have become cracked or deformed.

Answered by:
Dr. Michael Libman

3. TSH Levels in Hypothyroidism Patients

In treating hypothyroidism, we strive to achieve a TSH of 1.0 mu/l. Why do we wait until TSH is greater than 5 mu/l to institute treatment in the face of an asymptomatic patient?

Question submitted by:
A. Brockway
Woodstock, Ontario

The normal level of TSH is between 0.5-5.0 mU/L, however, some studies suggest that the upper limit of normal should be 2.0 mU/L. If a patient has been diagnosed with hypothyroidism and the decision has been made to start treatment, we typically adjust the dose of thyroxine based on symptoms and the TSH level, and once the TSH normalizes, we assume that a state of euthyroidism has been achieved.

On the other hand, in an asymptomatic patient who has a TSH level of greater than 5 mU/L, the benefit of treatment is not entirely clear. If the TSH is elevated and the patient is asymptomatic, the patient likely has subclinical hypothyroidism and most studies have not consistently demonstrated any untoward outcomes of this condition if left untreated, nor have any consistent significant benefits of treatment been demonstarted. Thus, if the TSH is elevated, FT4 level is normal and the patient is asymptomatic, the patient may not necessarily require treatment.

Answered by:
Dr. Hasnain Khandawala

4. Interpretation of HBV and DNA Levels

When monitoring patients with Hepatitis B carrier state, how do you interpret the HBV DNA levels?

Question submitted by:
Dr. Ben Pangilinan
Thornhill, Ontario

The role of treatment in the Hepatitis B "carrier state" remains a difficult area. This state is usually defined as the presence of hepatitis B surface antigen, with absence of "e" antigen and normal alanine aminotransferase (ALT). It is known that ALT may vary over time, and that some patients with normal ALT nevertheless have ongoing liver damage. Hepatitis B Virus (HBV) DNA can provide additional information regarding the likelihood of significant hepatic inflammation, but DNA levels also fluctuate over time, and a clear threshold for disease which should be treated cannot be established. It has been suggested that levels < 2,000 IU/mL probably indicate that the risk of progressive disease is very low. Higher levels may sometimes be associated with disease severe enough to warrant treatment and liver biopsy and may be indicated in these individuals, as this is the most reliable way to assess inflammation and fibrosis. Even biopsy has issues with sampling error, and repeat biopsies are sometimes indicated over time.

Answered by:
Dr. Michael Libman

Hypocalcemia and Hypoglycemia

5.

What treatment should be considered for hypocalcemia and hypoglycemia in full-term newborn rate and what should the concentration of fluids be?

Question submitted by:
Dr. Said Ramadan
London, Ontario

Hypocalcaemia in full-term newborns can occur due to stress, some medications, or as a result of maternal diabetes. Even though it is frequently asymptomatic, hypocalcemia can also uncommonly be associated with seizures. There are many neonatologists who feel that asymptomatic infants should be treated with oral calcium, while there is agreement that infants with seizures believed to be related to hypocalemia should be treated with intravenous calcium, typically 10% calcium gluconate in a dose of 1 to 2 ml/kg over 10 minutes, with a maximum daily dose of 50 to 75 mg/kg/day. Calcium chloride, an alternative form of intravenous calcium, has been associated with a higher rate of irritation of the vein and is not as commonly used in children. When giving intravenous calcium, the infusion should be given over ten minutes and not as a push, as this can produce a cardiac arrythmia. As well, intravenous access must be secure as extravasation of calcium can produce significant skin damage.

Hypoglycemia in full-term newborns can also occur in response to a number of conditions, of which the most common by far is maternal diabetes. Another group of infants at risk are term infants born small for their gestational age. Symptoms of hypoglycemia include irritability and tremor; more severe symptoms can include seizures. Early recognition of hypoglycemia is important as unrecognized newborn hypoglycemia is not only more difficult to treat but has been associated with adverse long term neurological outcomes. Early feeding of infants at risk (infants of diabetic mothers) is associated with a lower risk for hypoglycemia. In the case of a newborn with symptomatic hypoglycemia, therapy should start with intravenous infusion of a bolus of 2.5 ml/kg of 10% glucose followed by infusion of glucose-containing intravenous fluids. Higher concentrations of glucose (such as D50) are very irritating to the veins of newborns; usually, 10% glucose will raise serum glucose concentrations to a safe range.

Answered by:
Dr. Michael Rieder

FOBT Screening vs Colonoscopy

6.

A patient has a positive fecal occult blood testing (FOBT) and follow-up colonoscopy is negative. Should the patient return to FOBT for screening or continue the interval colonoscopies?

Question submitted by:
Dr. Don Pinksen
Guelph, Ontario

Colonoscopy is the gold standard diagnostic test for colorectal cancer; it can find most polyps and cancers. Annual or biennial screening with fecal occult blood testing (FOBT) also reduces the incidence and mortality rate from colorectal cancer. However, only two percent of patients with a positive test have cancer. Thus, for every patient with cancer, about 50 patients are subjected to anxiety. FOBT is not designed for the detection of polyps since polyps usually do not bleed. Thus, when colonoscopy is performed and a technically adequate examination occurs with a good bowel preparation, additional screening with FOBT tests is not indicated.

Answered by:
Dr. Jerry McGrath

Vaginal Yeast Infection Treatment

7.

What is the best treatment for recurrent vaginal yeast infections? Can fluconazole be used daily, weekly or as a preventative therapy?

Question submitted by:
Dr. Roshan Dheda
Bradford, Ontario

Yeast infections can be treated locally with a course of topical antifungal creams or suppositories, or systemically with 150 mg fluconazole. Recurrent yeast infections affect up to 8% of women who suffer four or more episodes per year. The treatment consists of longer courses of local medications or more frequent dosing of oral fluconazole. Anti-fungal creams and suppositories can be applied for 10 to 14 days and oral fluconazole, 150 mg, repeated three to six days later. Both treatments are equally effective but the oral fluconazole has almost twice the systemic side effects such as headaches and nausea. It is thus the preference of the patient, as to which treatment works best for her. Preventive treatment may be given once active infections are resolved. Fluconazole 150 mg orally or clotrimazole 500 mg vaginal suppository can be administered once weekly. Fluconazole can interact with other medications and a pharmacist may assist in assessing interactions. It is not recommended in the first trimester of pregnancy.

Answered by:
Dr. Cathy Popadiuk

Difficulties in Treating Patients with LBD

8.

What are the difficulties in treating patients with Lewy Body Dementia (LBD)?

Question Submitted by:
Dr. K Shirakumar
Sudbury, Ontario

The common clinical presentation of LBD involves cognitive impairment, visual hallucinations, spontaneous parkinsonism, and fluctuating confusion. Although there is yet no specific pharmacologic treatment for LBD, symptoms can be managed by a variety of agents (*e.g.*, dopaminergic agents, cholinesterase inhibitors, antidepressants, *etc.*).[1] Consequently, the best approach to treatment of LBD is to manage target symptoms that have been identified by the patient or caregiver as most concerning.[1,3]

The treatment and management of patients with LBD can be complicated by the individual neuropsychiatric profile and extrapyramidal symptoms experienced. With respect to cognitive impairment, it is essential that commonly distressing symptoms such as hallucinations, apathy, depression, and sleep disorders are managed.[2] The cholinesterase inhibitors appear to be more effective for improving fluctuating cognitive impairments, visual hallucinations, apathy, anxiety, and sleep in LBD than in Alzheimer's disease.[4,5] However, the main challenge associated with using such agents for cognitive improvement in this population is the orthostatic hypotension associated with their use. This common side effect increases the already significant risk for falls in this patient population due to the concurrent physical symptoms associated with the disease.[1] Through awareness of the risk of syncope and falls (and their associated complications) resultant morbidity and mortality can be avoided. Dopaminergic agents are the most commonly used agents to address the extrapyramidal symptoms that complicate functional status in LBD.[1] Although they can lead to symptom improvement, unfortunately they appear to be less effective in this population than in patients with Parkinson's Disease due to the additional intrinsic striatal pathology and dysfunction seen in LBD.[6]

The fact that drugs with anticholinergic side effects should be avoided adds another level of challenge. Medications with such side effects (*e.g.*, tricyclic antidepressants, low potency neuroleptics, antiparkinsonian drugs with anticholinergic properties, antispasmodics for bladder or the gastrointestinal tract, *etc.*) may not only worsen cognition and psychotic symptoms, but they may also be associated with orthostatic hypotension.[1,7] As these agents would be helpful to treat many of the cognitive and functional symptoms in LBD, it presents physicians with yet another challenge when trying to select the most appropriate medication for their patient.

In summary, when creating a therapeutic plan for a patient with LBD, it is important for physicians to consider the patient's needs and desires, as well as balance the safety and tolerability of the selected medications, since each may have side effects that may worsen both motor and cognitive functions. Using the lowest dose possible and introducing medications one at a time may also improve patient outcomes.[1,8]

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Answered by:
Professor Joel Lamoure
Contributor: Ms. Jessica Stovel

Treating Sexual Dysfunction in Risperidone Patients

9.

What are the options for treating sexual dysfunction in a 40-year-old male on long term Risperidone with secondary elevation of prolactin?

Question submitted by:
Dr. Paul Provencal
Ste-Anne-de-Bellevue, Québec

Antipsychotic agents can often lead to hyperprolactinemia because of their anti-dopaminergic activity. In return, the elevated prolactin can lead to a state of secondary hypogonadism. There are various options to consider in this scenario. The antipsychotic agent may be discontinued if clinically appropriate. If not, the patient could be switched to the newer atypical antipsychotic agents, which do not cause significant hyperprolactinemia. Generally, treatment with dopamine agonist agents such as bromocriptine of hyperprolactinemia caused by antipsychotics is not typically recommended, as dopamine agonists can potentially exacerbate the underlying psychotic condition. Testosterone supplementation is certainly an option. Though it will not normalize the prolactin level, it should improve the sexual dysfunction caused by the hyperprolactinemia induced hypogonadism.

Answered by:
Dr. Hasnain Khandwala

Schilling Test Alternatives

10.

What are alternatives to schilling test for a patient with suspected B12 deficiency?

Question submitted by:
Dr. Jean Serres
St. Laurent, Québec

Unfortunately, there are no good alternatives to the Schilling test. Some have advocated intrinsic factor antibody (poor sensitivity), serum gastrin or pepsinogen I (poor specificity), or a combination for pernicious anemia. However, these tests are expensive, difficult to obtain, and do not help to definitively diagnose the underlying cause.

Please note that a schilling test is ideally used for determining etiology of B12 deficiency not to confirm it. To confirm B12 deficiency, one should have at least two separate values of low serum B12 levels or a low serum B12 value with an elevated methylmalonic acid level. An elevated fasting homocysteine level will also be present.

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

Gamma-glutamyl Transpeptidase Elevation

11.

Is it common to see Gamma-glutamyl transpeptidase (GGT) elevation only in a patient's liver function test who is taking lipid lowering drugs?

Question submitted by:
Dr. Pierrette Diagle
Dieppe, Newbrunswick

Gamma-glutamyl transpeptidase (GGT) is an enzyme present in cell membranes in many tissues such as the liver, kidneys, pancreas, spleen, heart, brain, and seminal vesicles. Elevated serum activity is found in diseases of the liver, biliary tract, and pancreas. It is elevated in this cholestatic hepatobiliary disease in a similar fashion to alkaline phosphatase. However, an elevation in serum GGT is not specific for cholestatic liver disease. Solitary elevation of serum GGT values are found in patients who ingest alcohol, or secondary medications such as barbiturates or phenytoin. Thus an isolated elevation in serum GGT may be an indicator of alcohol abuse or alcoholic liver disease. Serum GGT has no advantage over aminotransferases and alkaline phosphatase in evaluating for liver disease other than conferring liver specificity to an elevated alkaline phosphatase or identifying patients with alcohol abuse.

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Answered by:
Dr. Jerry McGrath