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Low Back pain cannot be treated by Acetaminophen

Though acetaminophen is one of the most renowned pain-killer and also recommended as a first-line analgesic for low back pain and pain related to hip and knee osteoarthritis (OA), evidence supporting this practice is weak. In a meta-analysis of data from 13 randomized trials, researchers assessed the efficacy and safety of acetaminophen (3000–4000 mg daily) versus placebo in 3500 patients with knee or hip OA and in 1800 patients with low back pain. In patients with low back pain acetaminophen was no more effective than placebo for pain and disability in the immediate term (≤2 weeks) or for pain, disability and quality of life in the short term (>2 weeks–3 months). Patients with hip or knee osteoarthritis who took acetaminophen had less immediate-term pain but not disability and less short-term pain (mean difference, −3.7 mm) and disability (mean difference, −2.9 mm) than those who took placebo. Adverse events, treatment withdrawals, medication adherence and use of rescue medications (e.g., naproxen) did not differ between groups but acetaminophen users were more likely to have abnormal results on liver function tests (roughly 6% vs. 2%). Notably, the long-term efficacy and safety of acetaminophen in patients with back pain or OA-related hip or knee pain are still unknown.

- Fabiha Tasnim

[Source:http://anesthesiaexperts.com/uncategorized/acetaminophen-ineffective-pain/]

NICE approves of Empagliflozin: The Recent SGLT2 inhibitor For Type II Diabetes

The National Institute for Health and Care Excellence (NICE), the executive body of Department of Health in the United Kingdom has permitted the use of SGLT2 inhibitor empagliflozin. Empagliflozin is a sodium-glucose co-transporter 2 (SGLT2) inhibitor that prevents glucose reuptake in the kidney leading to the excretion of excess glucose in the urine. If a patient with type II diabetes needs to take 2 antidiabetic drugs then empagliflozin (also known as Jardiance) can be prescribed along with metformin but it applies only when the individual cannot be administered with sulfonylurea or is at a major risk of hypoglycaemia or its aftereffect. It has also been authorized in a triple therapy regimen in combination with metformin and either a sulfonylurea or thiazolidinedione (glitazone). The good news prolongs to declare that it can be used along with insulin and even with other antidiabetic drugs.

- Farzana Islam

[Source: www.pharmacytimes.com]

Acute Coronary Syndrome

Do you or someone you know have chest pain which spread towards the left arm or angle of the jaw? Is this usually associated with nausea and sweating? So you go to the doctor and are diagnosed with Acute Coronary Syndrome (ACS). It refers to a group of conditions due to decreased blood flow in the coronary arteries so parts of the heart muscle do not function properly. Now you know what it means! What next? This is where the oral anticoagulant rivaroxaban is helpful. How to look for it? Rivaroxaban was invented and is manufactured by Bayer and in a number of countries it is marketed as xarelto. It works by inhibiting the blood coagulation cascade by inhibiting free FXa and prothrombinase activity. Rivaroxaban has no direct effect on platelet aggregation.

As with all drugs, we need to know the risks associated with rivarozaban before starting or continuing treatment. The most common of which includes unusual and/or extensive bleeding, especially when taken with aspirin, heparin, warfarin sodium, clopidogrel and the like which cause bleeding. These symptoms should not be avoided and medical help should be sought right away. Other more severe but less common side effects are bloody stools, coughing up blood and change in amount of urine produced. Let us not forget that after starting the treatment the condition needs to be reassessed within 12 months to decide whether or not to continue it.

Prevention of ACS:

ACS is usually caused mainly due to atherosclerosis which refers to a full or partial block in the arteries which lead to decreased blood flow. Primary prevention of atherosclerosis is controlling the risk factors, healthy eating, exercise, treatment for hypertension and diabetes, avoiding smoking and controlling cholesterol levels. **- Labiba Mahmud**

[Source: www.mims.co.uk]

New tool predicts Ebola infection risk

Using his experience of treating Ebola-infected patients in Liberia last year, a US doctor has developed a tool to predict whether suspected Ebola patients would actually carry the virus. The findings may help clinicians determine who is most likely to require isolation while laboratory tests confirm diagnosis. Adam Levine, an emergency medicine physician at the Rhode Island Hospital and The Miriam Hospital, presented his research in a paper published in the journal Annals of Emergency Medicine. "There is a lag time between a suspected case and a confirmation," Levine said. This is the first time that researchers scientifically derived a clinical prediction model, the Ebola Prediction Score, for patients with suspected Ebola Virus Disease (EVD) who await laboratory confirmation, the study noted. Levine pointed out"The Ebola Prediction Score will help clinicians risk-stratify patients already meeting one or more suspect definitions of EVD". Typical predictors for EVD include fever, nausea/vomiting, diarrhea, fatigue, abdominal pain, loss of appetite, muscle pain, joint pain, headache, and difficulty in breathing, difficulty in swallowing, hiccups, unexplained bleeding, and exposure to a suspected or confirmed EVD patient within 21 days. In Levine's Ebola Prediction Score tool, six of those symptoms create the model -- sick contact, diarrhea, loss of appetite, muscle pain, difficulty in swallowing and absence of abdominal pain. EVD has affected 24,000 people during the current epidemic, which is the largest recorded outbreak of EVD in

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history. Over 10,000 people have died in West Africa, mainly in Sierra Leone, Liberia and Guinea. For the study, Levine used patient data collected during routine clinical care at the 52-bed Bong County Ebola Treatment Unit (ETU) in Liberia.

- Mehmuna Morshed

[Source:http://bdnews24.com/health/2015/04/04/new-tool-predicts-ebola-infection-risk]

Multidisciplinary rehabilitation approach to alleviate chronic low back pain

In a recent study, 41 randomized controlled trials were examined to determine the effects of multidisciplinary rehabilitation on patient suffering from chronic low back pain and it was found out that combined physical and psychological treatment is much better than the usual care for the long term pain and disability although, this not only is research-intensive but also is costlier than surgery. The physical component of the multidisciplinary rehabilitation approach includes exposure to heat, electrotherapeutic modalities or manual therapies such as stretching and strengthening and the psychosocial component includes a social or a working element. The combination of both physical and psychosocial elements in such patients yielded results which were compared with 6900 patients (suffering from pain for over 12 months) who were treated by other means and an association of moderate-quality was found out in which multidisciplinary rehabilitation was significantly more effective in patients suffering from chronic low back pain and disability. This correlation is effective but not in the absence of long-term work. Also, multidisciplinary rehabilitation was found to be less significantly effective than physical treatment alone for the long-term disability and work absence; however, this is not effective for long-term pain. This meta-analysis of multidisciplinary rehabilitation was also compared with patients with chronic low back pain who underwent surgery. It was found out that surgery-treated patient outcomes were common to that found in the multidisciplinary approach.

-Zainab Syed Ahmed

[Source: http://www.bmj.com/content/350/bmj.h444]

Air Pollution and Stroke: A Worldwide Risk Factor?

Outdoor air pollution is an important risk factor for cardiovascular disease throughout the world, with particulate air pollution alone responsible for over three million deaths each year. Increases in concentrations of daily air pollution are associated with acute myocardial infarction and admission to hospital or death from heart failure. These associations could be mediated through direct and indirect effects of exposure to air pollutants on vascular tone, endothelial function, thrombosis, and myocardial ischaemia. Stroke accounts for five million deaths each year and is a major cause of disability. The incidence of stroke is increasing, particularly in low and middle income countries, where two thirds of all strokes occur. To examine this association on a large scale, researchers performed a meta-analysis of 94 studies that examined the relation between air quality and either admission to the hospital for stroke or stroke mortality. In total, 6.2 million events from 28 countries were included. Results show that hospital admission or stroke mortality was significantly increased with incrementally increasing levels of gaseous pollution (relative risk per 1 ppm carbon monoxide, 1.015; per 10 ppb sulfur dioxide, 1.019; and per 10 ppb nitrogen dioxide, 1.014). Significant increases in stroke admissions or mortality were also seen with each 10-$\mu g/m^3$ increase in particulate air pollution of <2.5 microns (relative risk, 1.011; 95% confidence interval, 1.011–1.012) and <10 microns (RR, 1.003; 95% CI, 1.002–1.004). Pooled estimates from low- to middle-income countries showed stronger associations than high-income countries for nitrogen dioxide (1.019 vs. 1.012) and particulate air pollution (1.004 vs. 1.002).

- Nabila Morshed

[Source: www.jwatch.org]

Linaclotide, the First Guanylate Cyclase C Agonist Approved for the Treatment of Irritable Bowel Syndrome

Irritable bowel syndrome (IBS) is a common and chronic disorder of the gut, especially colon, which covers a wide variety of symptoms including cramping, abdominal pain, diarrhea and constipation. Currently, IBS is significant burden to healthcare system as it has high prevalence and lack of effective treatment. Linaclotide has been recently recommended for the treatment of moderate to severe IBS with constipation (IBS-C) by various authorities including FDA, European Medicines Agency (EMA) and also the NICE Guidelines for IBS. Linaclotide is a guanylate cyclase C agonist which carries out its action by increasing the level of cyclic guanosine monophosphate (cGMP) that causes increased secretion of fluid and reduced visceral hypersensitivity, leading to accelerated GI transit. Linaclotide also acts locally in the GI tract so it has less bioavailability and thus reduces chances of adverse systemic effects. The NICE Guidelines for IBS suggests that linaclotide can be used to treat IBS with constipation in cases where all other laxatives have proved to be ineffective and also the patients are suffering from constipation for at least a year. Linaclotide has been found to relief the symptoms like abdominal pain and bloating. However, linaclotide shows a common side-effect of diarrhea and the FDA and EMA suggests the dose of linaclotide to be 290µg for IBS-C. Thus linaclotide seems to be a promising treatment option for IBS-C which has two mechanisms of action and effective in relieving the symptoms associated with this condition and has an advantage of less systemic exposure leading to lowered risk of adverse systemic effects.

- Nausheen Sayeara

[Source: http://formularyjournal.modernmedicine.com]