NEW DRUGS

Vascepa Fish Oil Capsules Help Reduce Triglycerides

Amarin's icosapent ethyl (Vascepa) is now approved as an adjunct to diet to reduce triglyceride levels in adults with severe hypertriglyceridemia (levels of 500 mg/dL or higher).

Eicosapentaenoic acid (ethyl-EPA) is an omega-3 fatty acid commonly found in fish. In a phase 3 trial, triglyceride levels declined by 33% with the study drug at its highest daily dose compared with placebo. There was no significant increase in low-density lipoprotein-cholesterol.

Vascepa will compete against a similar omega-3 fish oil product, Lovaza, made by GlaxoSmithKline. The purified form of the ethyl ester of ethyl-EPA is expected to be available in the first quarter of 2013.

Sources: www.biocentury.com; *Forbes* online July 26, 2012

Zaltrap for Colon Cancer

Ziv-aflibercept (Zaltrap, Sanofi/Regeneron), an angiogenesis inhibitor, has been approved in combination with FOLFIRI chemotherapy for the treatment of resistant metastatic colorectal cancer. FOLFIRI consists of leucovorin calcium (folinic acid), fluorouracil, and irinotecan (Camptosar, Pfizer) after oxaliplatin (Eloxatin, Sanofi)-based chemotherapy.

In the phase 3 VELOUR trial, 1,226 patients with metastatic colorectal cancer were randomly assigned to receive FOLFIRI plus placebo or aflibercept. The addition of aflibercept was associated with a 1-month improvement in overall survival and a 2-month increase in progression-free survival.

The aflibercept–FOLFIRI regimen was considered safe for patients previously treated with bevacizumab (Avastin, Genentech), another angiogenesis inhibitor. The label's boxed warning mentions the risk of severe or fatal bleeding and gastrointestinal (GI) perforation.

Aflibercept was approved in 2011 as Eylea (Regeneron) for the treatment of wet macular degeneration.

Sources: FDA and *MedPage Today*, August 3, 2012

Generic Approvals

Montelukast for Asthma and Allergies

The first generic versions of Singulair (montelukast sodium) are now approved for adults and children to control asthma symptoms and to help relieve symptoms of indoor and outdoor allergies. Montelukast blocks the action of leukotrienes, which cause the symptoms of asthma and hay fever (allergic rhinitis).

Apotex, Aurobindo, Endo, Glenmark Generics, Kudco Ireland, Mylan, Roxane, Sandoz, Teva, and Torrent will be selling generic tablets. Apotex, Aurobindo, Endo, Kudco, Mylan, Roxane, Sandoz, Teva, and Torrent received approval to sell chewable tablets. Teva received approval for the oral granule form.

Source: FDA, August 3, 2012

Itraconozole Capsules for Infections

Mylan Pharmaceuticals has received approval from the FDA to sell itraconazole capsules 100 mg. A generic version of Janssen's Sporanox, itraconazole is used to treat fungal infections, blastomycosis, histoplasmosis, and aspergillosis in patients who have not responded to amphotericin B (Fungizone, Apothecon). Itraconazole has been associated with congestive heart failure and rare cases of serious hepatotoxicity, including liver failure and death.

Source: Mylan, July 27, 2012

Pioglitazone for Type-2 Diabetes

The FDA has approved Mylan's generic version of Actos (pioglitazone HCl, Takeda/Eli Lilly) 15-mg, 30-mg, and 45-mg tablets. Along with diet and exercise, pioglitazone is used to improve blood glucose control in adults with type-2 diabetes mellitus.

A boxed warning emphasizes the risk of heart failure. The labeling also notes that the use of pioglitazone for more than 1 year might be associated with an increased risk of bladder cancer. A patient medication guide is included.

Source: FDA, August 17, 2012

Oxaliplatin for Colon Cancer

Teva Pharmaceutical Industries Ltd. has announced the availability of oxaliplatin injection in the U.S. Equivalent to Sanofi's Eloxatin Injection, this product is available as 5 mg/mL, in strengths of 50 mg and 100 mg, in single-dose glass vials. Oxaliplatin injection 50 mg/10 mL and 100 mg/20 mL is indicated for the adjuvant treatment of stage III colon cancer in patients who have undergone complete resection of the primary tumor and treatment of advanced colorectal cancer.

Source: Teva, August 11, 2012

NEW INDICATION

Lucentis for Diabetic Eye Disease

Ranibizumab (Lucentis, Genentech) is now approved for patients with diabetic macular edema (DME), a leading cause of blindness among middle-aged populations.

The drug is given by intravitreal injection once monthly to patients with good glycemic control. DME is a complication of type-1 and type-2 diabetes. Microvascular defects caused by excess blood glucose lead to fluid leakage inside the retina, resulting in impaired vision.

Ranibizumab inhibits a protein involved in the formation of blood vessels. As an inhibitor of vascular endothelial growth factor (VEGF), it is also approved for treating neovascular (wet) age-related macular degeneration and macular edema resulting from retinal vein occlusion.

The FDA panel had recommended approval of a dose of 0.3 mg per injection and approval of a 0.5-mg dose by an 8-2 vote. However, studies found no additional benefit with the 0.5-mg injection.

In the trials, more ranibizumab-treated patients experienced improved vision and less disease progression.

Adverse effects have included ocular infections, retinal detachment, and cataracts.

Source: *The Wall Street Journal* (online), *MedPage Today*, August 10, 2012

NEW FORMULATIONS

Marqibo for a Rare Leukemia

Vincristine sulfate liposome injection (Marqibo, Talon) has been approved as an orphan drug for adults with recurrent or progressive Philadelphia chromosome–negative acute lymphoblastic leukemia (ALL) after the failure of at least two other treatments. The once-weekly intravenous (IV) injectable product was granted an accelerated approval.

Marqibo is a targeted version of vincristine, a vinca alkaloid used in cancer treatment. Vincristine is encased within a liposome, a drug-delivery vehicle composed of material similar to that of cell membranes.

A boxed warning indicates that Marqibo is intended for IV use only. There is also a risk of an overdose because of the various dosage recommendations from vincristine sulfate injection alone.

Sources: FDA, American Society of Hematology, *The Wall Street Journal*, August 9, 2012

Rayos for Inflammatory Diseases

Horizon has received approval for Rayos, a delayed-release form of prednisone, for the treatment of rheumatoid arthritis, polymyalgia rheumatica, psoriatic arthritis, ankylosing spondylitis, asthma, and chronic obstructive pulmonary disease. The FDA's approval was supported by data from the Circadian Administration of Prednisone in RA (CAPRA-1 and CAPRA-2) trials. Rayos tablets are sold in strengths of 1 mg, 2 mg, and 5 mg.

Sources: FDA, Horizon, July 26, 2012

DRUG NEWS

Revised Guidelines for Opioids

Opioid abuse has been increasing at an alarming rate since the 1990s. In 2005, the American Society of Interventional Pain Physicians published the first guidelines for prescribing opioids. The society has now published a revision, *Guidelines for Responsible Opioid Prescribing in Chronic Non-Cancer Pain*.

The 2012 guidelines address patient care, adherence, monitoring, adverse effects, discontinuation, maintenance and initial therapy, methadone, and curtailing opioid abuse without jeopardizing non-cancer pain treatments.

Source: *Pain Physician*, 2012;15:S1–S66 (July)

Dangers of Codeine in Children

The FDA has reported that three children died and one child experienced nonfatal but life-threatening respiratory depression after taking codeine following tonsillectomy and adenoidectomy. The children, who had undergone surgery to treat obstructive sleep apnea, had received typical codeine doses.

Signs of an overdose in a child can include unusual sleepiness, difficulty being aroused or awakened, confusion, or difficulty breathing. If a parent or caregiver notices any of these signs, the medication should be stopped and medical attention should be sought immediately.

Codeine is converted to morphine in the liver by cytochrome P450 isoenzyme 2D6 after it is taken. Some people metabolize codeine much faster than others and are likely to have higher than normal serum levels of morphine after taking a dose. High codeine levels can lead to overdose and death. The three children who died after taking codeine exhibited evidence of being ultra-rapid metabolizers. A genetic test is the only way to determine whether a person is an ultra-rapid metabolizer.

Source: FDA, August 15, 2012

Flu Vaccines for 2012–2013

Six vaccine formulations have been approved for the 2012–2013 influenza season. The strains selected for inclusion in the 2012–2013 flu vaccines are A/California/7/2009 (H1N1)-like virus, A/Victoria/361/2011 (H3N2)-like virus, and B/Wisconsin/1/2010-like virus. Although the H1N1 virus is the same as that included in the 2011–2012 vaccines, this year's influenza H3N2 and B viruses differ from those in last year's vaccines. The vaccines are Afluria (CSL Limited); Fluarix (GlaxoSmithKline); FluLaval (ID Biomedical Corp.); FluMist (MedImmune); Fluvirin (Novartis/Diagnostics Ltd); and Fluzone, Fluzone High-Dose, and Fluzone Intradermal (Sanofi Pasteur).

Source: FDA, August 13, 2012

Urology Group: Prostate Cancer Screening Saves Lives

The Large Urology Group Practice Association (LUGPA), representing more than 1,800 urologists, has praised a new study confirming the impact of prostate-specific antigen (PSA) testing on the early detection of prostate cancer. The study indicated that without the PSA test, it was likely that more than three times as many men would have presented with advanced disease. The findings confirmed that eliminating the PSA test might result in missed opportunities to treat men with early-stage disease.

Earlier this summer, the U.S. Preventive Services Task Force recommended that PSA screening be avoided in asymptomatic men. LUGPA claims that this one-size-fits-all policy poses a danger for men at greatest risk (African-Americans and those with a family history of prostate cancer). The American Urological Association and the American Association of Clinical Urologists also support PSA diagnostic screening.

However, the American Society of Clinical Oncology (ASCO) recommends that doctors discourage PSA testing for

men with a life expectancy of less than 10 years.

Sources: *Cancer,* August 1, 2012, online; www.lugpa.org; Associated Press, July 16, 2012

Controversy: Blood Pressure Drugs and Lip Cancer

In an observational study, five widely used antihypertensive drugs seemed to confer as much as a four-fold increased risk of lip cancer with long-term use in non-Hispanic Caucasians. The photosensitizing properties of the drugs were associated with a 42% to 322% greater risk of lip cancer compared with a matched control group with no history of the disease.

The drugs were lisinopril (e.g., Zestril, AstraZeneca), nifedipine (Procardia, Pfizer), and atenolol (Tenormin, AstraZeneca), hydrochlorothiazide (HCTZ) alone, and HCTZ in combination with triamterene (Dyazide, GlaxoSmithKline). When the other agents were excluded, atenolol alone did not increase the risk.

Although most antihypertensive drugs are photosensitizing, lip cancer is rare. Any increased risk is usually outweighed by the benefits of the drugs. The study did not show cause and effect, but the analysis did suggest a biological mechanism that was consistent with a causal relationship.

An earlier study had shown an increased risk of lip cancer among patients who received three or more prescriptions for HCTZ and the calcium-channel blocker nifedipine. In the current study, significantly more patients with a history of lip cancer reported the use of HCTZ, HCTZ–triamterene, lisinopril, and nifedipine. More patients in the cancer group reported using nifedipine alone, whereas use of atenolol alone was more common in the control group.

The risk of lip cancer increased with duration of use; atenolol, however, was not associated with an increased risk until after 5 years of treatment.

Sun protection is recommended whether or not a person is taking a photosensitizing agent. Sun exposure is considered the primary cause of all skin and lip cancers.

Sources: *Arch Intern Med*, August 2012 (online); *Cancer Causes Control* 2009;20:1821–1835; *MedPage Today*, August 6, 2012

DEVICE NEWS

Recalled: Catheter Set

Arrow International's Multi-Lumen Venous Catheterization Set with Blue FlexTip ARROWg+ard Catheter has been recalled. The catheter is used to deliver drug therapy.

The labeling stated that the device contained no medication; however, the product contained chlorhexidine and silver sulfadiazine (e.g., Silvadene), which can cause anaphylaxis, rash, and hives in some patients. The set also lacks a warning for the chlorhexidine contraindication. If a patient with a sensitivity to chlorhexidine or silver sulfadiazine is exposed to this product, there is the potential for serious adverse health consequences, including death.

Source: FDA, July 30, 2012

Approved: A 'Talking' Injector For Anaphylaxis

The first voice-guided epinephrine-injection device (Auvi-Q, Sanofi) has been approved for the emergency treatment of patients with a history of severe allergic reactions. The device can be used by children weighing at least 33 pounds.

The patient is guided through the injection process with audiovisual or written directions. After the injection is completed, the patient is urged to seek emergency medical attention and to refill the prescription. Written instructions are also provided. The device should be used only on the outer thigh.

Two dosages are available: 0.15 mg for patients weighing 33 to 66 pounds and 0.3 mg for those weighing more than 66 pounds. The system is bioequivalent to the Dey EpiPen autoinjector.

Source: FDA, August 14, 2012

NEW MEDICAL DEVICES

Marvin M. Goldenberg, PhD, RPh, MS

Name: VersaVIT Vitrectomy System

Manufacturer: Synergetics USA, Inc., O'Fallon, Mo.

Approval Date: June 27, 2012

Purpose: The device is used during surgery to repair a detached retina or to treat other conditions such as diabetic retinopathy, macular holes, preretinal membrane fibrosis, infections, or ocular bleeding.

Description: The surgeon uses a microscope and special lenses to see the back of the eye. Tiny incisions are made through the sclera to remove the vitreous humor.

Benefit: Weighing less than 25 pounds, the system is portable and compact. It can be run on battery power and gas cartridges for use in ambulatory centers and in the practitioner's office.

Sources: www.medlatest.com; *The Wall Street Journal*, June 27, 2012; www.synergeticsusa.com

Name: iStent Trabecular Micro-Bypass Stent System, Model GTS-100R/L

Manufacturer: Glaukos Corp., Laguna Hills, Calif.

Approval Date: June 25, 2012

Purpose: The iStent is the first device approved for use in cataract surgery to reduce intraocular pressure in adults with both open-angle glaucoma (the most common form) and a cataract.

Description: The small L-shaped titanium tube is placed through the meshwork of tissue to create an opening between the eye's anterior chamber and Schlemm's canal. This allows fluid to drain, potentially decreasing intraocular pressure. When properly implanted inside the eye,

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