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Issue 8

RPCC Pharmacy Forum

Special Interest Articles:

- New Treatment for Psoriasis
- Understanding Biologics
- SGLT 2 Inhibitors and Ketoacidosis

Did you know?

America's biopharmaceutical research companies are using biological processes to develop 907 medicines and vaccines targeting more than 100 diseases.

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New Treatment Options for Psoriasis

There are two new treatment options for moderate to severe plaque psoriasis, Otezla (apremilast) and Cosentyx (secukinumab). About 20% of psoriasis patients need systemic medicines added to topical. Methotrexate is traditionally tried first. It is important with methotrexate to monitor liver function and blood cell counts to detect possible liver or bone marrow toxicity.

Otezla (oh-Tez-luh) is an oral phosphodiesterase 4 inhibitor, commonly referred to as a PDE4 inhibitor. PDE4 inhibitors are known to possess precognitive (including long-term memory-improving), wakefulness-promoting, neuroprotective, and anti-inflammatory effects. PDE4 inhibitors have been investigated as treatments for a diverse group of different diseases. Otezla may be safer than other oral medicines in this class and it does not need lab monitoring, but it costs $1875/month (compared to $50 for methotrexate). Diarrhea and nausea are common early in therapy and Otezla can cause weight loss and depression.

Biologics are gaining popularity (see next article). They work better than oral medicines for psoriasis and are often better tolerated. Biologics do increase the risk for severe infections and are costly. Cosentyx (koe-SEN-tix) is a new biologic and the first interleukin-17A blocker for psoriasis. Cosentyx should be used when other biologics do not work (Humira or Stelara). Cosentyx costs about $3400/month. Cosentyx is injected under the skin. The first 4 doses are usually given once per week, then once every 4 weeks.

Understanding Biologics: How they differ from drugs

Biologics have revolutionized the treatment of such chronic illnesses as rheumatoid arthritis, psoriasis, psoriatic arthritis, Crohn's disease, and multiple scleroisis and are widely used in treating a variety of cancers. Some biologics have been around a long time. First generation biologics include vaccines, and blood and blood components. Second generation biologics have come to the market only in the past 10-15 years. Biologics are derived from living organisms. Second generation biologics rely on biotechnology for their manufacture.

In contrast to most drugs that are chemically synthesized and their structure is known, most biologics are complex mixtures that are not easily identified or characterized. Biological products, including those manufactured by biotechnology, tend to be heat sensitive and susceptible to microbial contamination. Therefore, it is necessary to use aseptic principles from initial manufacturing steps, which is also in contrast to most conventional drugs.

Biological products often represent the cutting-edge of biomedical research and, in time, may offer the most effective means to treat a variety of medical illnesses and conditions that presently have no other treatments available.

New Opioid-Induced Constipation Therapy

Movantik (mo-VAN-tick, naloxegol) is the first once-daily oral peripherally-acting mu-opioid receptor antagonist (PAMORA) medication for the treatment of opioid-induced constipation (OIC) in adult patients with chronic, non-cancer pain. Movantik is suggested for use when osmotic laxatives or stimulants aren't enough. Movantik is an Opioid antagonist that inhibits opioid binding in the gut to increase motility but doesn't affect analgesia. The central nervous system penetration of Movantik is expected to be negligible, limiting the potential for interference with opioid pain relief. The most common adverse reactions with Movantik are abdominal pain, diarrhea, nausea, flatulence, vomiting, and headache. Movantik is a pegylated derivative of naloxone.

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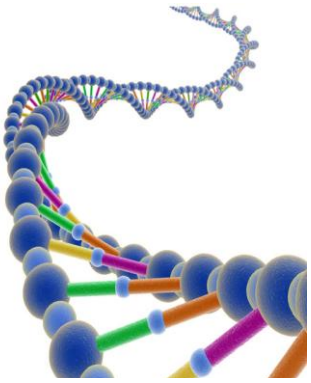

SGLT2 Inhibitor Diabetes Drugs May Cause Ketoacidosis

The US Food and Drug Administration (FDA) warned in May 2015, that sodium-glucose cotransporter-2 (SGLT2) inhibitors or "flozins" used to treat type 2 diabetes may lead to ketoacidosis requiring hospitalization. This class of medications works by triggering the kidneys to release excess blood glucose through the urine. It is indicated for treatment of patients with Type 2 diabetes, which cannot be controlled through diet and exercise. The warning includes the SGLT2 inhibitors canagliflozin (*Invokana*), dapagliflozin (*Farxiga*), and empagliflozin (*Jardiance*), as well as three combination products that include an SGLT2 inhibitor: canagliflozin plus metformin (*Invokamet*), dapagliflozin plus metformin extended release (*Xigduo XR*), and empagliflozin plus linagliptin (*Glyxambi*).

Signs of ketoacidosis include Kussmaul respirations with possible fruity odor, nausea, vomiting, abdominal pain, confusion, and unusual fatigue and sleepiness. In all cases reported, the median time to onset of symptoms after initiation of drug therapy was 2 weeks (range, 1–175 days). In most cases, a high anion-gap metabolic acidosis accompanied by elevated blood or urine ketones was reported.