MEDICAL INTERNET NEWS

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WebMD Health News

FDA Approves Fast-Acting Nasal Spray for Migraines, Pfizer Says

Written by Ralph Ellis

March 10, 2023 -- The FDA has approved a nasal spray that is expected to provide fast relief from migraines, the pharmaceutical company Pfizer said Friday.

The drug zavegepant will be sold under the brand name Zavzpret and should be available in pharmacies by July 2023, the company said in a news release. The cost of the drug has not been revealed yet.

Clinical trials published in *The Lancet Neurology* showed the nasal spray provided migraine relief within 15-30 minutes of use, with the relief lasting up to 48 hours in many patients, Pfizer said. About 1,400 people participated in the trials from October 2020 to August 2021.

“As a nasal spray with rapid drug absorption, Zavzpret offers an alternative treatment option for people who need pain relief or cannot take oral medications due to nausea or vomiting, so they can get back to normal function quickly.”

Pfizer says Zavzpret is the first product of its kind. It works by blocking the peptide receptors that cause inflammation that often comes with migraine.

Pfizer said the drug was approved to treat acute migraine with or without aura – meaning a severe headache accompanied by uncomfortable symptoms such as dizziness, a ringing in the ears, zigzag lines in vision, or sensitivity to light.

The American Migraine Foundation says 39 million Americans and 1 billion people worldwide live with migraine.

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Parkinson's disease: How intense exercise can help ease symptoms

Health experts recommend regular exercise for people with Parkinson's disease. Thomas Barwick/Getty Images

- **Researchers are reporting that high intensity exercise can help ease symptoms of Parkinson's disease.**
- **Experts say the benefits are apparent in both the early and later stages of disease.**
- **They add that exercise helps people with Parkinson's disease by improving brain**

How does it help?

"Exercise has been shown to stimulate the production of neurotrophic factors, such as brain-derived neurotrophic factor (BDNF). These factors play a crucial role in the growth, survival, and maintenance of neurons. These play a crucial role in the growth of new neurons, protect existing neurons, and enhance synaptic connections," said Jennifer Prescott, RN, MSN, CDP, the founder of Blue Water Homecare and Hospice.

"Exercise has been shown to improve mitochondrial function and promote their biogenesis (formation of new mitochondria). Healthy mitochondria are crucial for energy production and overall neuronal health," Prescott told *MNT*.

What type of exercises are best for Parkinson's?

"Regular exercise helps maintain motor function in [Parkinson's] patients and may slow the progression of the disease," said Dr. Andrew Feigin, the executive director of the Marlene and Paolo Fresco Institute for Parkinson's and Movement Disorders at NYU Langone Health in New York.

- power walking
- swimming
- water aerobics
- exercise bikes

More

Daily Dose of Aspirin Linked With Anemia in Older People

Emily Harris

Article Information

JAMA. 2023;330(3):210. doi:10.1001/jama.2023.11954

Taking a 100-mg dose of aspirin each day was associated with a 20% higher risk of anemia compared with a placebo, according to a secondary analysis of results from the ASPREE (Aspirin in Reducing Events in the Elderly) randomized clinical trial that included 19 114 people aged 65 years or older. The incidence of anemia was about 51 events per 1000 person-years in the aspirin group and 43 events in the placebo group. Participants who received daily aspirin also tended to have a larger decrease in ferritin levels—a measure of overall iron stores—and in hemoglobin concentration over 3 and 5 years, respectively.

Anemia in older people—likely caused in this case by aspirin-induced bleeding, such as blood loss in stool—is tied to outcomes including functional decline, fatigue, and higher mortality. The findings therefore reinforce new guidelines that promote aspirin as a tool for secondary—not primary—prevention of cardiovascular disease in older people, and support regular monitoring of hemoglobin in patients who use the drug, the researchers wrote in the *Annals of Internal Medicine*.

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Artificial intelligence-based model to classify cardiac functions from chest radiographs: a multi-institutional, retrospective model development and validation study

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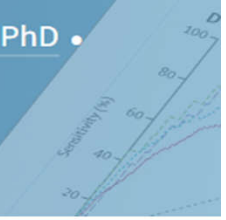

Background

Chest radiography is a common and widely available examination. Although cardiovascular structures—such as cardiac shadows and vessels—are visible on chest radiographs, the ability of these radiographs to estimate cardiac function and valvular disease is poorly understood. Using datasets from multiple institutions, we aimed to develop and validate a deep-learning model to simultaneously detect valvular disease and cardiac functions from chest radiographs.

Methods

In this model development and validation study, we trained, validated, and externally tested a deep learning-based model to classify left ventricular ejection fraction, tricuspid regurgitant velocity, mitral regurgitation, aortic stenosis, aortic regurgitation, mitral stenosis, tricuspid regurgitation, pulmonary regurgitation, and inferior vena cava dilation from chest radiographs. The chest radiographs and associated echocardiograms were collected from four institutions between April 1, 2013, and Dec 31, 2021: we used data from three sites (Osaka Metropolitan University Hospital, Osaka, Japan; Habikino Medical Center, Habikino, Japan; and Morimoto Hospital, Osaka, Japan) for training, validation, and internal testing, and data from one site (Kashiwara Municipal Hospital, Kashiwara, Japan) for external testing. We evaluated the area under the receiver operating characteristic curve (AUC), sensitivity, specificity, and accuracy.

Findings

We included 22 551 radiographs associated with 22 551 echocardiograms obtained from 16 946 patients. The external test dataset featured 3311 radiographs from 2617 patients with a mean age of 72 years [SD 15], of whom 49·8% were male and 50·2% were female. The AUCs, accuracy, sensitivity, and specificity for this dataset were 0·92 (95% CI 0·90–0·95), 86% (85–87), 82% (75–87), and 86% (85–88) for classifying the left ventricular ejection fraction at a 40% cutoff, 0·85 (0·83–0·87), 75% (73–76), 83% (80–87), and 73% (71–75) for classifying the tricuspid regurgitant velocity at a 2·8 m/s cutoff, 0·89 (0·86–0·92), 85% (84–86), 82% (76–87), and 85% (84–86) for classifying mitral regurgitation at the none-mild versus moderate-severe cutoff, 0·83 (0·78–0·88), 73% (71–74), 79% (69–87), and 72% (71–74) for classifying aortic stenosis, 0·83 (0·79–0·87), 68% (67–70), 88% (81–92), and 67% (66–69) for classifying aortic regurgitation, 0·86 (0·67–1·00), 90% (89–91), 83% (36–100), and 90% (89–91) for classifying mitral stenosis, 0·92 (0·89–0·94), 83% (82–85), 87% (83–91), and 83% (82–84) for classifying tricuspid regurgitation, 0·86 (0·82–0·90), 69% (68–71), 91% (84–95), and 68% (67–70) for classifying pulmonary regurgitation, and 0·85 (0·81–0·89), 86% (85–88), 73% (65–81), and 87% (86–88) for classifying inferior vena cava dilation.

Interpretation

The deep learning-based model can accurately classify cardiac functions and valvular heart diseases using information from digital chest radiographs. This model can classify values typically obtained from echocardiography in a fraction of the time, with low system requirements and the potential to be continuously available in areas where echocardiography specialists are scarce or absent.

Medical News in Brief

FREE

June 28, 2023

Testosterone Therapy Did Not Increase Major Cardiovascular Events

Emily Harris

Article Information

JAMA. 2023;330(3):211. doi:10.1001/jama.2023.11959

Men who received testosterone therapy for an average of about 22 months did not experience a greater number of major adverse cardiac events compared with those who received a placebo, based on results from a randomized clinical trial that enrolled 5246 patients aged 45 to 80 years. All participants had low levels of testosterone as well as symptoms of underfunctioning gonads—such as decreased libido, low mood, or loss of body hair—in addition to a preexisting or high risk of cardiovascular disease.

Pulmonary embolisms occurred in 0.9% of men who received testosterone and 0.5% of men who received the placebo. In addition, more participants in the testosterone group had nonfatal arrhythmias that required intervention, atrial fibrillation, and acute kidney injury.

Writing in the *New England Journal of Medicine*, the authors said the findings can help inform decisions for middle-aged and older men with hypogonadism.

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WebMD Health News

Docs Steer Camera Through Stomach 'Like a Little Mars Rover'

Written by Sarah Amandolare

June 23, 2023 – When emergency room patients complain of stomach pain, doctors have limited options. Scans and ultrasounds can't show the inner lining of the digestive tract, so patients are often sent home without answers.

Upper endoscopies, where a flexible tube with a tiny camera is fed into the upper digestive tract, require anesthesia and can only be done by a gastroenterologist, so patients may be sent to another department, admitted to the hospital, or told to return another day. This can delay the diagnosis and treatment of potentially life-threatening conditions like stomach cancer or bleeding ulcers.

But a new technology could speed things up, making belly pain easier and faster to diagnose. It involves a tiny camera, a large magnet, and two video game-style joysticks. Known as magnetically controlled capsule endoscopy, the technology was recently tested in the U.S. for the first time.

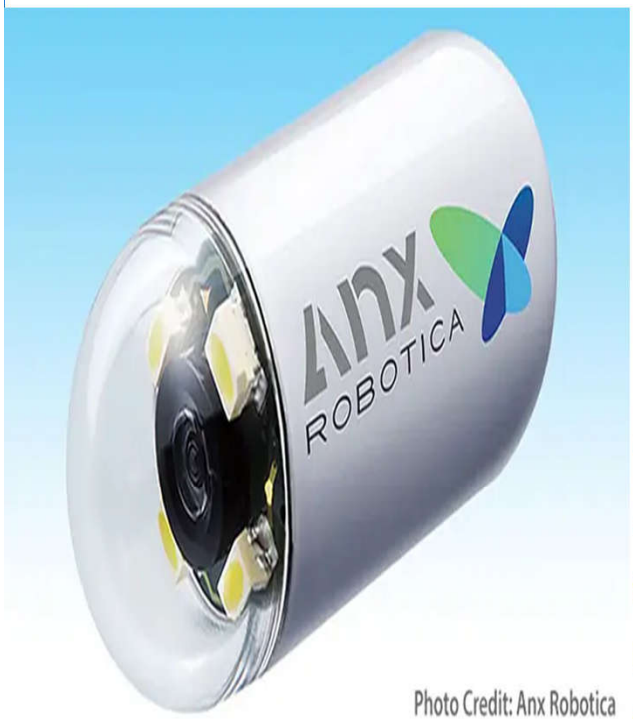

Photo Credit: Anx Robotica

It works like this: The patient swallows a magnetic, pill-sized device with a tiny camera. Then they lie on their back with a dome-shaped magnet hovering above their belly. Using the joysticks, a doctor manipulates the magnet, steering the capsule around the stomach and capturing images in real time that can be reviewed by an off-site gastroenterologist.

"I can almost grab onto the capsule and drag it across," said study author Andrew Meltzer, MD, an emergency medicine professor at the George Washington School of Medicine & Health Sciences. "If I bring the magnet closer to the patient, the capsule will lift up toward the front of their stomach, and if I pull the magnet away, the capsule will drop down. I can also rotate the capsule around and look in all directions."

In the pilot study, emergency room doctors were able to guide the capsule through the stomachs of 40 patients, identifying key stomach landmarks 95% percent of the time. The capsule's wide-angle lens captures six pictures per second, "which actually looks like a relatively smooth video," Meltzer said. Standard endoscopies later confirmed that the capsule did not overlook any high-risk lesions.

NaviCam® Capsule Specifications

- Field of View 160°: (Optical field of view per ISO-8600-3)
- Diameter: 11.8mm
- Length: 27mm
- Frame Rate: 0.5 - 6fps
- Battery Rate: >16 hrs. (1fps)
- Resolution: 640 x 480 (CMOS Imager)

VIDEO

THE END