

Letemovir for cytomegalovirus (CMV) prophylaxis in hematopoietic-cell transplantation

Chemaly RF et al.

NEJM 2014;370:1781-1789.

Cytomegalovirus (CMV) infection is a leading cause of illness in patients who have undergone allogeneic hematopoietic-cell transplantation.

The authors used letermovir, a new anti-CMV drug, from March 2010 through October 2011 in 88 transplant recipients for 20 weeks at a dose of 240 mg/day. A total of 43 participants served as controls according to a double-blind design. CMV prophylaxis was obtained in 71% patients as compared to 28% in placebo controls. The safety profile of letermovir was similar to that of placebo controls.

A 52-week placebo-controlled trial of evolucumeb in hyperlipidemia

Blom et al.

NEJM 2014; 370:1809-1819

Evolucumeb is a monoclonal antibody that reduces low-density lipoprotein (LDL) cholesterol levels.

The patients with hyperlipidemia were classified according to their lipid levels. On the basis of the classification, patients were started on background lipid-lowering therapy with diet alone or diet in combination with atorvastatin at a dose of 10 mg/day or atorvastatin at a dose of 80 mg/day in combination with evolucumeb at a dose of 10 mg/day for a run-in period of 412 weeks. Patients with low-density lipoprotein (LDL) cholesterol level of 75 mg/dL or higher were randomly assigned in a 2:1 ratio to receive either evolucumeb or placebo every 4 weeks. The primary endpoint was the percent change from baseline in LDL cholesterol.

The reduction of LDL cholesterol from baseline markedly decreased in the evolucumeb group than in the placebo group ($P < 0.001$), which was quite significant.

FDA Approval of paroxetine for menopausal hot flashes

Orleans RJ et al.

NEJM 2014; 370: 1777-79

Paroxetine is a nonhormonal option for the treatment of moderate-to-severe vasomotor symptoms associated with menopause for women who cannot or do not want to use hormonal medication to treat their menopausal symptoms. Paroxetine is a selective serotonin reuptake inhibitor. Suicidal ideation related to its use should be kept in mind until better-controlled approaches are obtained.

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Mechanism of Onset of Parturition / Cell-free DNA a Trigger of Parturition

Phillipe M.

NEJM 2014; 370:2534-6.

The presence of cell-free DNA derived from fetal or placental sources seems to trigger parturition. The level of cell-free DNA increases in placenta at the end of gestation. When the level reaches to a certain level, cell-free DNA stimulates the toll-like receptor 9 (or with others) that in turn activates the innate immunity system, ultimately leading to parturition. During this process, inflammation begins.

Is the Source of Middle Eastern Respiratory Syndrome (MERS) Coronavirus (CoV) Camels? Evidence for the camel to human transmission of MERS coronavirus

Azhar E et al.

NEJM 2014; 370:2449-2505

The isolation and sequencing of Middle Eastern respiratory syndrome coronavirus (MERS-CoV) obtained from a camel and from a patient who was in close contact with the animal (owner) and died of laboratory-confirmed MERS-CoV infection showed the same virus in patient and camel. The full genomic sequence of the two isolates was identical.

When deferral of HIV treatment might be better? Timing of antiretroviral therapy after diagnosis of cryptococcal meningitis

Boulvare DR et al.

NEJM 2014; 370:2487-2498

Antiretroviral treatment (ART) is essential for survival in human immunodeficiency virus (HIV) infection, and early initiation of the treatment is better. But, in 177 patients infected with HIV who had cryptococcal meningitis, early treatment of ART (earlier than 2 weeks of amphotericin B initiation) was found more morbid; especially in individuals in whom cerebrospinal fluid contained less than 5 lymphocytes. Therefore, ART treatment for HIV infection would be better to be started 5 weeks after cryptococcal meningitis treatment with amphotericin B (0.71.0 mg/kg) and fluconazole (800 mg/day).

VKORC1 ER mislocalization causes rare disease

Van Horn W.D.

Blood 2014; 124 (8)

Vitamin K activates these vitamin-dependent coagulation proteins (Factor II, Factor VII, Factor IX, and Factor X) in the endoplasmic reticulum of hepatocytes. In the occurrences of VKORC1 mislocalization, gamma-carboxylation of Vitamin K dependent proteins cannot be accomplished. Therefore, Vitamin K dependent coagulation deficiencies occur. This molecular approach enhances our understanding about Vitamin K dependent coagulation deficiencies.

Does Colorectal Adenoma Removal Prevent Colorectal Cancer?

M. Løberg et al.

NEJM 2014; 371:799-807

Although colonoscopic surveillance of patients after removing adenomas is widely promoted, little is known about colorectal-cancer mortality among these patients.

Using the linkage of the Cancer Registry and the Cause of Death Registry of Norway, the authors estimated colorectal-cancer mortality among patients who had undergone removal of colorectal adenomas during the period from 1993 through 2007. Patients were followed through 2011. They calculated standardized incidence-based mortality ratios using rates for the Norwegian population at large for comparison. Norwegian guidelines recommended colonoscopy after 10 years for patients with high-risk adenomas (adenomas with high-grade dysplasia, a villous component, or a size 10 mm) and after 5 years for patients with three or more adenomas; no surveillance was recommended for patients with low-risk adenomas. Polyp size and exact number were not available in the registry. We defined high-risk adenomas as multiple adenomas and adenomas with a villous component or high-grade dysplasia.

The authors identified 40,826 patients who had their colorectal adenomas removed. During a median follow-up of 7.7 years (maximum, 19.0), 1273 patients were diagnosed with colorectal cancer. A total of 398 deaths from colorectal cancer were expected and 383 were observed among patients who had their adenomas removed. Colorectal-cancer mortality increased among patients with high-risk adenomas, but it reduced among patients with low-risk adenomas.

After a median of 7.7 years of follow-up, colorectal-cancer mortality was lower among patients who had their low-risk adenomas removed and moderately higher among those who had their high-risk adenomas removed, as compared with the general population. If these results confirmed by the other researchers; need to be follow-up of low grade adenomas, could be severed at longer time which could decrease colonoscopies and the cost!

Self-reported Transition Readiness among Young Adults with Sickle-Cell Disease

Sobota A et al.

Journal of Pediatric Hematology/Oncology (Feb 2014)

A growing body of literature addresses the need for transition programs for young adults with sickle-cell disease (SCD); however, studies assessing transition readiness are limited, and there are few validated instruments to use.

The authors conducted a pilot study to assess transition readiness of patients with SCD in their transition program and to evaluate an SCD-specific assessment tool that measures 5 knowledge skill sets (medical, educational/vocational, health benefits, social, and independent living) and 3 psychological assessments (feelings, stress, and self-efficacy).

Of the 47 SCD patients between the ages of 18 and 22 seen in their facility, 33 completed the assessment tool. A majority of patients reported good medical knowledge of SCD, and they were motivated to pursue a career despite the burden of living with the disease. The authors identified knowledge gaps in the area of independent living and health benefit skills sets. A majority of patients reported were worried that their SCD would prevent them from doing things in their life; however, a few respondents were worried or anxious about their transition to adult care.

Adolescents beginning a transition intervention program reported a high level of knowledge of their disease and demonstrated a positive attitude toward transition with good self-efficacy.

Predictors of Successful Air Enema Reduction of Intussusception in Infants Less than 4 Months of Age

Li J, Yang L, Wang J, Sheng M, Guo W

Journal of Pediatric Gastroenterology and Nutrition (Feb 2014)

Intussusception is rare in infants less than 4 months of age, and the use of air enema for reducing intussusception has been limited.

In this retrospective study, we analyzed the predictors of successful reduction of intussusception using air enema in infants less than 4 months of age.

This is a retrospective chart review of 97 intussusception patients of less than 4 months of age between January 2008 and December 2012. Demographic data, clinical presentation, and outcomes of air enemas were collected and analyzed. We used univariate and multivariate logistic regression analyses for significant predictors of successful reduction of intussusception using air enemas.

Of the 97 infants less than 4 months of age (median age, 97.6 days; age range, 41-119 days), 63 (65%) were boys and 34 (35%) were girls. The duration of symptoms ranged from 5 to 53 hours, with a median of 16.3 hours. Clinical features included paroxysmal crying (75%), vomiting (68%), bloody stools (61%), and palpable abdominal masses (32%). The duration of symptoms, bloody stools, and the shape of the intussusceptum were found to be significantly predictive of the outcome of air enema reduction of intussusception.

The rate of successful reduction of intussusception using air enemas in infants younger than 4 months is low. Such factors as the duration of symptoms, bloody stools, and the shape of the intussusceptum are predictive of the outcome of air enema reduction of intussusception.

Assessment of sleep problems in children with familial Mediterranean fever

Makay B, Kiliçaslan S, Anik A, Bora E, Bozkaya O, Cankaya T, Unsal E.

International Journal of Rheumatic Diseases (Mar 2014)

This study aimed to investigate sleep patterns, sleep disturbances, and possible factors that are associated with sleep disturbances among children with familial Mediterranean fever (FMF).

A total of 51 patients with FMF and 84 age- and sex-matched healthy controls were enrolled in the study. The patients who had an attack during the last 2 weeks were not included. Demographic data, FMF symptoms, disease duration, dose of colchicine, disease severity score, number of attacks in the last year, MEFV mutation, and serum C-reactive protein (CRP) levels were recorded for each patient. A Children's Sleep Habits Questionnaire was filled.

The total sleep scores of the patients with FMF were significantly higher than those of the control group. The total sleep durations were similar between FMF patients and controls. Children with FMF had significantly higher scores regarding sleep-onset delay, sleep anxiety, night wakings, and sleep-disordered breathing when compared with healthy controls. A significant positive correlation was observed between the number of attacks in the last year and sleep onset delay, night wakings, and sleep-disordered breathing. Disease severity score and CRP levels were not associated with any of the subscale scores. The patients with exertional leg pain had significantly higher total sleep scores than the ones without. Furthermore, patients with exertional leg pain had significantly higher subscale scores regarding sleep onset delay, parasomnias, and sleep-disordered breathing.

This study showed for the first time that children with FMF had more sleep disturbances than their healthy peers. Higher numbers of attacks and exertional leg pain were associated with poor sleep quality. In conclusion, this study underlines the need to assess and manage sleep problems in children with FMF.