

## ELDERLY HOSPITALIZED FEBRILE PATIENTS WITH A SUSPECTED URINARY TRACT INFECTION: DIAGNOSTIC AND THERAPEUTIC APPROACH

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Since the urinary tract is thought to be one of the common sources of fever in hospitalized geriatric patients, urine analysis and urine cultures are routinely ordered in patients with and without urinary tract symptoms. The widespread lack of understanding of the uncertainties in the diagnosis and treatment of a symptomatic urinary tract infection (UTI) leads to unnecessary laboratory testing, and inappropriate antibiotic therapy. We present evidence for the following

proposal that on the one hand will limit urine cultures and unnecessary antibiotic therapy without compromising patient safety and on the other hand will ensure proper antibiotic therapy. (1) Patients with extra-urinary sources for their fever should not have a urinalysis or urine culture. (2) In-and-out urinary catheterization procedures to obtain a sample should be limited (3) Patients without a positive dipstick test result do not need a urine culture in some settings. (4) A negative microscopic urinalysis after a positive dipstick test does not rule out a symptomatic UTI. (5) Febrile elderly patients without evidence of end organ damage can be followed-up carefully without antibiotic therapy. (6) Patients with septic shock require immediate antibiotic treatment with a carbapenem. It is unclear however, what to do with patients who have evidence of end organ damage variously defined. Whether these patients need immediate antibiotic treatment with or without coverage of ESBL-producing bacteria to decrease the risk for in-hospital mortality is an important question that requires randomized controlled studies . ●

### כרוניקה

## תגובה סגולית של תאים להדבקות מנגיפים



ל, לגבי נגיפי איידס, צהבת מסוג C HTLV מסוג 1. אנאליזה של הדינמיקה הנגיפית בניסויי הישרדות במבחנה ומודלים מתמטיים מציעים כי קשירת iKIR מגבירה את הקשר לנגיפים על ידי שיפור הישרדות תאי T. בניגוד לדיווחים המקשרים בין iKIR למחלות, תצפיות אלה מתאימות לכל סוגי iKIR ושלושה הנגיפים שנלמדו.

איתן ישראלי

תאים ציטוטוקסיים מסוג CD+ T8, חשובים בהגנה בפני זיהומים נגיפיים. **בואלן וחב'** (Sci Immunol 2018;3:eaa02892) חקרו האם קולטנים מעכבים הורגים דמויי אומנוגלובולינים - iKIR הנמצאים בקרב חולים כרוניים במחלות נגיפיות, עשויים להשפיע על יעילות הפעולה של תאי CD+8. החוקרים מצאו כי מציאות הגן המקודד ל-iKIR יחד עם הגן המקודד לליגנד iKIR, הגביר את ההגנה של HLA מקבוצה

### כרוניקה

## התפרצות סלמונלה סיפי עמידה לאנטיביוטיקה ולתרכיב



מציע לשלב בלוחמה במחלה זו, תרכיב המבוסס על רעלן טטנוס קשור לאנטיגן פולטכרידי VI של סלמונלה. התרכיב מקנה הגנה של 60-80% מפני המחלה, אך הוא דורש הזרקות דחף כל שנתיים שלוש, ועוד פעם לאחר 5 שנים. יש עדין אי בהירות אם ניתן לחסן בתרכיב זה ילדים מתחת לגיל 6 חודשים, אך ארגון הבריאות העולמי וארגונים נוספים תומכים בהפצת התרכיב, וארגון GAVI הקציב למשימה 85 מיליון דולר. הכותב ממליץ להתחיל בפעולה מניעתית כל זמן שחלון הזמן לכך עדיין פתוח.

איתן ישראלי

בעיר הידראבאד בפקיסטן התפרצה מחלת טיפואיד הנגרמת על ידי חיידק סלמונלה סיפי העמיד למספר רב של חומרים אנטיביוטיים. הזן המתפרץ הגיע עתה גם לקראצ'י בת 14 מיליון תושבים. יותר מאלף הדבקות אוששו באמצעות תרבית דם, אך החשש הוא כי מספר הנדבקים הלא מדווחים גדול בעשרות מונים. הזן המסומן 58 H מכיל גני עמידות לאנטיביוטיקה בכרומוזום, אך גם על פלסמידים. **אנדריס וחב'** (NEJM 2018;379:1493) מדווחים על רכישת העמידות של חיידק זה משנת 1948 עד ימינו וגורס כי בקרוב עלול הוא לרכוש גם עמידות לקרבאפנם, ואז יתפשט במהירות ברחבי העולם. הוא

therapy use in pregnancy has not been sufficiently evaluated to determine safety or efficacy and should only be used under supervision, after a risk benefit analysis. The aim of this review is to provide an overview of current guidelines regarding NRT use in pregnancy, considering the existing evidence base on safety, efficacy and effectiveness. ●

## STRIAE GRAVIDARUM – ETIOLOGY, PREVALENCE AND TREATMENT

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Striae gravidarum is the second most prevalent skin manifestation after skin pigmentation during pregnancy. Its etiology is uncertain, but it is assumed that changes in the structure of collagen, mediated by hormonal changes during pregnancy, are the causative factor. These marks normally appear during the third trimester of pregnancy and disappear several months after delivery. Striae gravidarum have no adverse health implications though they have negative psychological effects on the affected gravid women. Several treatments for this coetaneous affliction have been tested but only skin rubbing of almond oil as well as extracts from the Centella tree have proved to be of limited therapeutic value. Nevertheless, it has been proven that the mere application of various creams for this coetaneous problem during pregnancy is effective in improving the feeling of the users. ●

## PRIMARY BILIARY CHOLANGITIS: THERAPEUTIC APPROACH IN THE MODERN ERA

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Primary biliary cholangitis (PBC) is a progressive, autoimmune cholestatic liver disease, predominantly affecting middle-aged women. Hallmark features include a persistent elevation of cholestatic liver enzymes, presence of anti-mitochondrial antibodies and characteristic histologic findings. PBC has a varied course of progression, ranging from mild uncomplicated disease to aggressive disease leading to cirrhosis and resulting in the need for liver transplantation. More than a half of the patients are asymptomatic, but the clinical phenotype varies, and symptoms may be debilitating and have a major impact on quality of life.

The goals of PBC management are slowing disease progression, amelioration of associated symptoms and addressing complications of chronic liver disease. The

introduction of ursodeoxycholic acid (UDCA) therapy and its universal use as the first-line therapy for PBC has favorably impacted long term prognosis and drastically changed the natural history and disease-related mortality.

However, a substantial subpopulation of patients exhibits an incomplete response to UDCA, associated with a sustained disease progression and a poor outcome. Recently, obeticholic acid (OCA) was officially approved as an add-on treatment in patients not responding or intolerant to UDCA. Although evidence for biochemical improvement by OCA is compelling, long-term clinical impact is still under ongoing research. Novel treatment concepts and potential therapeutic options are under investigation. The current review addresses treatment aspects of PBC, while shedding light on the latest updates in patients' management and follow-up. ●

## THE PARADIGM SHIFT IN MEDICINE FOLLOWING THE 4TH INDUSTRIAL REVOLUTION

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A tremendous paradigm shift is occurring in the field of medicine. This is because the forward momentum in the evolving sphere of digital medicine has opened up new worlds of discovery that all fuse together to form a tsunami of innovation, along with sociological and social changes. The exponential rate of technological change creates profound sociological and social changes and these dynamics affect the medical field. This paper reviews some dimensions of this paradigm shift, such as the transition from illness to a focus on wellness; the shift from slow medicine into exponential medicine; personalized medicine to digital medicine, and more.

Each paradigm shift creates challenges for health professionals, regulators, the public and the industry. The bottom line is that medicine is shifting from hospital back to the home.

Physicians, health care organizations, the Ministry of Health, insurance companies and the industry need to prepare for this change - each in their respective areas of expertise. Careful strategic thinking is required, not only to adjust to the change but also to promote it in a patient-centered manner. The role of the medical doctor, the utilization of exponential technologies and finding new uses for existing hospital infrastructures are only secondary challenges with the primary consideration being improving people's health and decreasing medical costs. The best minds and talents should be involved in preparing for this shift and in planning "home hospitalizations" supported by technologies that will give the new patient - consumer exactly what they want and need. ●

**Methods:** Eligible subjects were hospitalized men aged  $\geq 65$  years with a discharge diagnosis of UTI whose URV was assessed at presentation. The clinical parameters and outcomes of patients with urinary retention ( $>400\text{ml}$ ) and ones without ( $\text{URV} \leq 400\text{ml}$ ) were compared.

**Results:** Eighty out of 184 patients (43.5%) had urinary retention while 104 (56.5%) did not. The two groups didn't differ in their demographic and clinical parameters. Large URV at admission was significantly associated with increased 30-day mortality [OR=4 [95% CI 1.15-14],  $p=0.03$ ] without significant impact on bacteremia rates and length of hospitalization.

**Conclusion:** Large URV at admission in elderly men with UTI is associated with increased 30-day mortality. Further prospective studies with different URV cutoffs are needed to explore this association and its pathophysiology. ●

## TREATMENT WITH DUAL ANTIPLATELET THERAPY FOR SECONDARY PREVENTION OF STROKE – PROS AND CONS

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The role of dual antiplatelet therapy combining aspirin and clopidogrel, is controversial. There are two settings in which such treatment might be considered: (a) patients presenting with a first ischemic event at high risk for a recurrence; and (b) patients who experience a second ischemic event while being treated with aspirin or clopidogrel monotherapy. In this paper we review the literature dealing with secondary prevention of ischemic stroke, with an emphasis on dual antiplatelet therapy. We examine international guidelines and present a case study which illustrates the application of this information. ●

## FUTURE CHALLENGES OF MEDICAL EDUCATION

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Medical education faces three challenges: those related to admission policies to medical schools (can "non-academic" qualifications such as compassion and social orientation be identified?), the clinical learning environment (is "bedside" teaching the optimal way to impart clinical skills?) and the duration of medical training (can it be shortened?).

I believe that over the next decades, the assessment of "non-academic" qualifications in screening medical school candidates will be the subject of critical review, and may

even be canceled; the limitations of the hospital learning environment will lead to the transfer of clinical training to community clinics; and that an effort will be made to reduce the duration of medical training by splitting the curriculum into distinct career tracks, such as primary medicine, biomedical research and diagnosis by ancillary testing, secondary and tertiary clinical medicine, and epidemiology and public health. ●

## INTERVENTIONS FOR SUPPORTING WOMEN TO STOP SMOKING IN PREGNANCY

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Smoking during pregnancy is a public health problem because of the many adverse effects associated with it. These include intrauterine growth restriction, placenta previa, abruptio placentae, decreased maternal thyroid function, preterm premature rupture of membranes, low birth weight, perinatal mortality, and ectopic pregnancy. An estimated 5–8% of pre-term deliveries, 13–19% of term deliveries of infants with low birth weight, 23–34% cases of sudden infant death syndrome (SIDS), and 5–7% of preterm-related infant deaths can be attributed to prenatal maternal smoking. The risks of smoking during pregnancy extend beyond pregnancy-related complications. Children born to mothers who smoke during pregnancy are at an increased risk of asthma, infantile colic, and childhood obesity.

Cigarette smoking and tobacco use during pregnancy have been associated with adverse pregnancy outcomes, including spontaneous pregnancy loss, placental abruption, preterm delivery and low birth weight. In addition, smoking during pregnancy impacts fetal and neonatal development, increase infections rate and is associated with an increased risk for long term pediatric cardiovascular morbidity of the offspring. Identifying maternal tobacco product use allows for targeted interventions.

Cessation of tobacco use and prevention of secondhand smoke exposure are key clinical intervention strategies during pregnancy and are recommended by obstetrical guidelines. Inquiry into tobacco use and smoke exposure should be a routine part of the prenatal visit and clinicians should provide pregnancy-tailored counseling for those who smoke.

National guidelines from Australia, the UK, New Zealand and Canada recommend the use of nicotine replacement therapy (NRT) by pregnant women who have been unable to quit smoking without medication. According to the American College of Obstetrics and Gynecology, nicotine replacement

## A COMPARISON OF THE BLUEPRINT FOR THE STEP 1 FAMILY MEDICINE CERTIFICATION EXAMINATION AND THE CONTENT OF FAMILY PRACTICE MEDICAL ENCOUNTERS IN ISRAEL

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**Background:** Since 1970, written (Step 1) and oral (Step 2) examinations have been part of the requirements for board certification in Israel.

**Objective and Methods:** To compare the content of Step 1 examinations in family medicine, that was derived from their blueprints in 2010-2016, with the content of family practice in the Jerusalem district in 2015, that was derived from the electronic database of Clalit Health Services.

**Results:** (a) The blueprints indicated that a Step 1 examination totaled 150 items. Of these, 20 (13%) were on general issues (health and disease, family, epidemiology, organization of practice); 25 (17%) items were on pediatric emergencies, acute and chronic problems. The remaining parts of the examination consisted of 5 to 10 items on each of the various clinical categories (subspecialties or organ systems). (b) The analysis of the electronic database of Clalit Health Services revealed that as many as 34% of the primary care diagnoses were related to administrative problems (filling out forms and renewal of prescriptions) and another 18% were defined as unspecified. Our comparison relates to the clinical problems: 18% of them were respiratory, 15% orthopedic and 11% ENT disorders. Dental problems comprised 1% of the encounters.

**Conclusions:** About half of the clinical problems in family practice consist of respiratory, orthopedic, ENT, gastrointestinal and skin disorders. Professional leaders may wish to consider whether these disorders should have greater representation in board examinations, and whether common dental problems and trauma should be part of the family practice curriculum and certifying examinations. ●

## THE PATIENT AND THERAPIST'S EXPERIENCE IN PSYCHIATRIC HOSPITALIZATION

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As part of the psychiatric hospitalization, the patients who face severe mental illness, suffer from considerable emotional distress, extreme behavioral changes, and at times are in danger to themselves and others. By virtue of the Law for the Treatment of the Mentally Ill, psychiatric

treatment is sometimes given under coercion. This abnormal situation produces complex conflicts in the therapeutic relationship.

In this article I will try to draw a line between a case study of a person suffering from schizophrenia who was hospitalized under coercion in the closed-door ward, and the concept of the "Uncanny" presented by Freud in his article "Das Unheimliche" - from 1919 in order to convey the unique emotional experience which accompanies the therapeutic alliance in the ward. ●

## PULMONARY EMBOLISM IN A PATIENT WITH KLINEFELTER SYNDROME

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Klinefelter syndrome (47, XXY) is the most common chromosomal aberration in males. It occurs in 0.15% of newborn males. The syndrome is related to increased mortality from a variety of medical problems including cardiovascular diseases, malignancies, nervous system disturbances, epilepsy and diabetes. In a review of the literature it was found that patients with the Klinefelter syndrome are more likely to develop thrombosis and pulmonary embolism. Even though the pathophysiological mechanism is still not entirely understood, we should consider the appropriate medical attention to the prevention and treatment of thromboembolic events in Klinefelter patients. ●

## THE ASSOCIATION BETWEEN URINE RESIDUAL VOLUME AT ADMISSION AND THE OUTCOMES OF HOSPITALIZED ELDERLY MEN WITH URINARY TRACT INFECTION

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**Background:** Early assessment of urine residual volume (URV) at admission is essential in elderly men with urinary tract infection (UTI). Large URV might predispose these patients to subsequent complications; nevertheless, only scarce data are available concerning the impact of URV on the outcomes of elderly men with UTI.

**Objectives:** To determine the impact of URV on the outcomes of elderly men hospitalized with UTI, including: bacteremia rates, length of hospital stay, short and long-term mortality.