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Internet giants and infectious disease experts are trying to harness new technologies to predict when and where the next pandemic might strike. With proper surveillance systems in place, disease spread and numerous deaths could be prevented, say experts. Eliza Barclay reports.


US Congress is to debate major reforms to the way chemicals are regulated in the country. The new push for a change to legislation comes in the wake of a series of public-health scares from toxic chemicals found in children’s toys, many of which were imports. Samuel Loewenberg reports.


Although the physical traumas of Lebanon’s turbulent past may have healed, the mental scars remain and many Lebanese with mental-health problems are turning to medication for help—a trend which some psychologists see as worrying. Kristin Elisabeth Solberg reports from Beirut.


Some countries such as the Philippines are taking valuable steps towards eliminating cases of human rabies but others, including India and Pakistan—which have well over a third of the global burden of the disease—could do far better. Talha Burki reports on the eve of World Rabies Day.

**PERSPECTIVES**


Around 1298 in the southern French city of Marseille, a young woman named Dulceta suffered from a prolonged labour, the fetus already dead in her womb. Dulceta remained an invalid for 2 years thereafter, bedridden from paralysis, worms growing in sores on her body, and “stinking so badly that scarcely anyone could stand to be near her”. As a historian, it will never be within my power to alleviate the sufferings of women such as Dulceta—now dead so many centuries ago. But it is within my power to retrieve some understanding of how the systems of knowledge and practice we call the medical art functioned in times very different from our own.


Illness is a dangerous thing. It can leave you with time on your hands. It can make you ask questions about life, and it can prompt you to write poems. Po Chü-I, writing over 1000 years ago, admitted that when sick, he could not bring himself “to discard inkstone and brush” even though whatever he wrote while ill would turn out to be “slight and flavourless”. Whatever compels us to write does not also enable us to do so well.


When Erika von Mutius tried to outsmart the funding authorities, she had no idea that when her plan backfired it would lead to “the big-break” in her medical career. “I had just spent 2 years running a study into the effect of air pollution on croup in children, but I’d had no experience of how to run a project and felt it had just all been a mess, so when my boss asked me to run another project I was desperate to avoid it. I therefore applied for an outrageously high sum of money so the authorities would reject me.


In 1698, the English physician John Floyer (1649–1734) published the first book in English on the symptoms, causes, and treatment of asthma. Floyer’s A Treatise of the Asthma was certainly not the first extensive discussion of the disease: in addition to the works of several ancient authors, including Aretaeus of Cappadocia (c 50–150 AD), a comprehensive account of the condition had been written in Arabic by the Jewish scholar Moshe ben Maimon (Maimonides, 1138–1204) in the 12th century. However, Floyer’s treatise, which was translated into French and German and went through several popular and influential English editions, became a pivotal work in the field, constituting a central point of reference for subsequent authors.


When Joy Lawn talks about maternal and newborn deaths, she speaks from experience. Her mother, a missionary in rural northern Uganda, had an obstructed labour and was taken to a remote bush hospital where she had an emergency caesarean section by a medic who had never done the procedure before. “My mother had terrible sepsis afterwards but she survived and I survived. We are alive because people shouted for us. Many similar stories end in disaster as there is no-one to shout”, recounts Lawn.


In Breathing Space: How Allergies Shape Our Lives
and Landscapes, Gregg Mitman explores the epidemic growth of allergic disease in the USA from the late 1800s to the present day. He uses individuals’ experiences to describe the complex relations between the ecology of animal, plant, insect, and man-made allergens and environmental, medical, and cultural factors.


At first it was a surprise to see that this impressive textbook covered both asthma and chronic obstructive pulmonary disease (COPD) in one volume. Asthma and COPD: Basic Mechanisms and Clinical Management is edited and written by prominent individuals who have done everything possible in the past to convey the message that asthma and COPD are two different diseases: that they are characterised by different risk factors; have a different pathophysiology; are characterised by clinical phenotypes that are distinctly different; require different therapeutic strategies; and probably pose very different challenges to the healthcare system.


American teenagers are in the middle of an almighty tug of war: between the nation’s highly sexualised pop culture, in which “naughty schoolgirls” cavorting in music videos is considered normal, and the classroom, where one in three publicly schooled teens are taught that the safest sex is no sex at all. Welcome to the era of abstinence-only sex education, the fastest growing form of sex education in the USA.

ARTICLES


Use of paracetamol in the first year of life and in later childhood, is associated with risk of asthma, rhinoconjunctivitis, and eczema at age 6 to 7 years. We suggest that exposure to paracetamol might be a risk factor for the development of asthma in childhood.


Conventional asthma management resulted in good control of symptoms in most participants. The addition of fraction of exhaled NO as an indicator of control of asthma resulted in higher doses of inhaled corticosteroids, without clinically important improvements in symptomatic asthma control.


Telmisartan was well tolerated in patients unable to tolerate ACE inhibitors. Although the drug had no significant effect on the primary outcome of this study, which included hospitalisations for heart failure, it modestly reduced the risk of the composite outcome of cardiovascular death, myocardial infarction, or stroke.


A socioculturally contextualised, community-based intervention, targeted at high-risk newborn-care practices, can lead to substantial behavioural modification and reduction in neonatal mortality. This approach can be applied to behaviour change along the continuum of care, harmonise vertical interventions, and build community capacity for sustained development.


Our results suggest that a stent eluting biolimus from a biodegradable polymer represents a safe and effective alternative to a stent eluting sirolimus from a durable polymer in patients with chronic stable coronary artery disease or acute coronary syndromes.

REVIEW


Asthma is a chronic inflammatory disease that affects about 300 million people worldwide, a total that is expected to rise to about 400 million over the next 15–20 years. Most asthmatic individuals respond well to the currently available treatments of inhaled corticosteroids and β-adrenergic agonists; however, 5–10% have severe disease that responds poorly. Improved knowledge of asthma mechanisms has led to the recognition of different asthma phenotypes that might reflect distinct types of inflammation, explaining the effectiveness of anti-leucotrienes and the anti-IgE monoclonal antibody omalizumab in some patients.


Clinical asthma is very widely assumed to be the net result of excessive inflammation driven by aberrant T-helper-2 (Th2) immunity that leads to inflamed, remodelled airways and then functional derangement that, in turn, causes symptoms. This notion of disease is actually poorly supported by data, and there are substantial discrepancies and very poor correlation between inflammation, damage, functional impairment, and degree of symptoms. Furthermore, this problem is compounded by the poor understanding of the heterogeneity of clinical disease.


The long-term solution to the asthma epidemic is thought to be prevention, and not treatment of established disease. Atopic asthma arises from gene–environment interactions, which mainly take place during a short period in prenatal and postnatal development. These interactions are not completely understood, and hence primary prevention remains an elusive goal. We argue that primary-care physicians, paediatricians, and specialists lack knowledge of the role of atopy in early life in the development of persistent asthma in children.

CASE REPORT


In March, 2007, a 31-year-old woman was advised by her midwife to attend the antenatal department at St Michael’s Hospital, because she had been itching all over her body for a week. She was 24 weeks pregnant. She had been pregnant twice before. Her first pregnancy had ended in miscarriage, at 11 weeks, and her second in intrauterine death, at 30 weeks. The cause of intrauterine death had not been identified; a thrombophilia screen and liver function tests had given normal results. The medical history was otherwise unremarkable.


In February 2006, an 80-year-old woman, born in India, who migrated to the UK in the 1960s, was brought to our emergency department by ambulance. She had shortness of breath, which had been present for 2 months, and gradually worsened, to a point where she was breathless at rest. She arrived on a Friday evening, so we were unable to contact her general practitioner, or to access extensive medical records. She spoke little English, but her sons interpreted for her. She had symptomatically mild ischaemic heart disease, hypertension, and type 2 diabetes, and was taking isosorbide mononitrate, dipyridamole, . .

CLINICAL PICTURE


A 55-year-old man with a history of aortic valve replacement was admitted because of pelvic pain. He had been treated with antibiotics over the past 4 weeks for a presumed lower urinary tract infection with fever. Treatment had been unsuccessful. Both urine and blood cultures grew Enterobacter cloacae. Abdominal radiography showed a thin line of air within the bladder wall, outlining its perimeter (figure). A bacteraemic emphysematous cystitis complicated by prosthetic valve endocarditis was diagnosed, and effective antibiotic treatment was initiated.
HEALTH POLICY


To address the gap between health investments and financial flows worldwide, we identified the patterns in allocation of funds by the four largest donors—ie, the World Bank, Bill & Melinda Gates Foundation (BMGF), the US Government, and the Global Fund to Fight HIV/AIDS, Tuberculosis and Malaria—in 2005. We created a disbursement database with information gathered from the annual reports and budgets. Funding per death varied widely according to type of disease—eg, US$1029·10 for HIV/AIDS to $3·21 for non-communicable diseases.