First global report on antimicrobial resistance released by the WHO

Antimicrobial agents are antibiotics and similar drugs that have been used for the past 70 years to treat patients with infectious diseases. Antimicrobial resistance is the microorganism’s (bacteria, viruses, fungi and parasites) resistance to an antimicrobial agent that was originally effective to treat infections caused by that particular microorganism. Such antimicrobial resistance can result in longer and more expensive hospital stays or even in death. Treatment is often with second- or third-choice drugs that may be more toxic, more expensive and less effective. Without urgent action, we are heading for a post-antibiotic era, in which common infections and minor injuries can once again cause death.

In a first of its kind, WHO released a global report on antimicrobial resistance titled ‘Antimicrobial resistance: Global report on surveillance’ with data from 114 countries. This report gives a complete picture on the present status of surveillance and antimicrobial resistance, in particular antibiotic resistance.

It reveals that antibiotic resistance is a key issue and no longer a dire prediction. Antimicrobial resistance is emerging in all parts of the world, but the consequences are disproportionately worse in developing nations.

The report focused on seven common bacteria that cause serious infections from blood stream infections to gonorrhoea. The key findings from the report include:

- Carbapenem antibiotics are often the last resort for life-threatening infections caused by Klebsiella pneumoniae, a major cause of hospital-acquired infections including pneumonia, blood stream infections and infections in newborns. However, in some countries, more than half the infections caused by K. pneumoniae are untreatable because of carbapenem resistance.
- Fluoroquinolones are widely used in the treatment of urinary tract infections caused by Escherichia coli. In many countries fluoroquinolones cannot be used in more than half the patients due to resistance.
- Third-generation cephalosporins are the last resort of treatment for gonorrhoea. Cephalosporin resistance has been confirmed in several countries including Austria, Australia, Canada, France, Japan and the UK.
- Patients infected with resistant organisms remain sick for longer and have increased risk of death. For example, patients infected with MRSA (methicillin-resistant Staphylococcus aureus) are 64% more likely to die than those infected with non-resistant strains of S. aureus.

The WHO report highlights that the key tools required to tackle antibiotic resistance (e.g. basic tracking and monitoring systems) are either insufficient or completely lacking in many countries.

Also, infections need to be prevented in the first place through better hygiene, access to clean water, infection control and vaccination. The report draws attention to the need for developing new diagnostics, antibiotics and other tools to allow healthcare professionals to stay ahead of antimicrobial resistance.

US Food and Drugs Administration (FDA) approves stand-alone HPV-DNA testing for cervical cancer screening

On 24 April 2014, the US FDA approved the Roche cobas® HPV test as a stand-alone test to screen women aged 25 years or older for cervical cancer. Earlier, the guidelines for cervical cancer screening were based primarily on Pap smear, with reflex to HPV testing in women with atypical or dysplastic squamous cells. The cobas® HPV test had been approved in 2011 for this purpose (i.e. in conjunction with or as a follow-up to a Pap test). However, the new approval expands the use of the test as a primary stand-alone test even without a Pap smear. The approval followed what Alberto Gutierrez, PhD, director of the Office of In Vitro Diagnostics and Radiological Health at the FDA’s Center for Devices and Radiological Health stated that the study was well-designed and had provided the FDA with a reasonable assurance of the safety and effectiveness when used as a primary screening tool for cervical cancer; the study was conducted by Roche Diagnostics, the manufacturer of the test. The Roche study included more than 40 000 women aged 25 years and older, undergoing routine cervical examinations. Data from this study, which included 3 years of follow-up on women who went to colposcopy, showed that the cobas® HPV test was safe and effective. The ATHENA (Addressing THE Need for Advanced HPV Diagnostics) study stated that a negative cobas® HPV test provided more than twice the confidence that lesions higher than cervical intraepithelial neoplasia (CIN) grade 3 will not develop within three years versus cytology alone.

Almost all cervical cancers are caused by HPV infection, with HPV types 16 and 18 being responsible for about 70% of these. The Roche cobas® HPV test identifies HPV 16, 18 and twelve other high-risk HPV types. The test simultaneously provides pooled results for high-risk genotypes (HPV-31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66 and 68) and individual results for HPV-16 and HPV-18, the highest-risk genotypes. Women who test positive for HPV 16 or 18 are recommended to undergo a colposcopy, whereas those that test positive for any of the other twelve types are recommended to have a Pap test to determine the need for a colposcopy. In addition to allowing this DNA test to be used by itself for cervical cancer screening, the FDA also decreased the age for HPV-DNA testing to 25 years from the current 30 years. Current guidelines recommend Pap smear from age 21 to 65 every three years. Women between 21 and 30 years of age would have received an HPV test only if their smears were abnormal. However, the new approval allows for direct HPV-DNA testing in women as young as 25 years. Does this mean that the HPV-DNA test will replace Pap smear? Probably not. There are still cost considerations as well as emotional aspects of over-screening and positive test results. However, the FDA approval gives women an additional choice. Dr M.J. Minkin, Clinical Professor of Obstetrics and Gynecology at Yale University School of Medicine was quoted as saying that currently, she did not think there was a right or wrong answer to say which was better.

HARESH MANI, VA, USA
BMJ and Indian physicians to take a stand against corruption in medicine in India

Corruption in healthcare is rampant in India and is damaging to the health of the citizens and the nation, states the BMJ in a recent issue. A commentary by Australian physician David Berger (who worked as a volunteer physician in a small charitable hospital in the Himalayas) and an accompanying editorial by Anita Jain, Samiran Nundy and Kamran Abbasi speaks about the problem.

India ranks a lowly 93rd in the list of corrupt nations according to Transparency Watch. This corruption exists in both the private sector as well as in the public sector. In the private sector, physicians are encouraged to over-investigate or over-treat patients, as a means of bolstering hospital income. In the public sector, bribes are given—and taken—to ensure preferential treatment; lack of a regulatory mechanism has ensured that corruption flourishes. Thus, physicians have lost people’s respect. This has also ruined the doctor–patient relationship in India. Corruption in the pharmaceutical industry and the nexus between pharmaceutical companies and doctors has worsened the problem.

Change is particularly difficult as corruption is firmly entrenched, yet the BMJ plans to initiate a movement against corruption in medicine, beginning in India. Berger suggests that private medical colleges be reformed; he also suggests that the affluent western countries that Indian physicians migrate to, derecognize degrees from such colleges.

Corruption in medicine also will be part of the National Bioethics Conference, held in December 2014 in Bengaluru. The theme of the conference is Integrity in Healthcare, and includes an international symposium on corruption in healthcare. Dr Amar Jesani, editor of Indian Journal of Medical Ethics (IJME), a co-organizer of the conference, says: “The IJME as a journal emerged from the struggle of a group of individuals interested in medical ethics against the lack of integrity and corruption in medical profession and its statutory bodies, the medical councils. Thus, the IJME is not a merely an academic journal, but also combines academic with the activism to reform the healthcare system. In this process of building ethical counter-current, ensuring the independence of the journal from the business and vested interests in the healthcare are of paramount importance.”

Dr Samiran Nundy (Editor Emeritus of the NMJI and Dean, Ganga Ram Institute for Postgraduate Medical Education and Research (GRIPMER) and GI surgeon, Sir Ganga Ram Hospital, New Delhi), hopes to lead this battle against corruption and says: ‘Unless we, the silent minority, expose corruption and punish those responsible we will be condemning our countrymen and women to medical care which is inefficient, inappropriate and unnecessarily expensive.’

REFERENCES

SANJAY A. PAI, Bengaluru, Karnataka

The National Medical Journal of India is looking for correspondents for the ‘News from here and there’ section. We are particularly interested in getting newswriters from the north and northeast regions of India as well as from other countries. By news, we refer to anything that might have happened in your region which will impact on the practice of medicine or will be of interest to physicians in India. The emphasis of the news items in this column, which are usually from 200 to 450 words, is on factual reporting. Comments and personal opinions should be kept to a minimum if at all. Interested correspondents should contact SANJAY A. PAI at s_pai@vsnl.com or nmji@nmji.in