Confronting the growing problem of antibiotic resistance

SHILPA JETHWA

With antibiotic-resistant infections continuing to rise and few new antibiotics in the development pipeline, tackling the issue of antibiotic overuse is crucial. Shilpa Jethwa outlines some of the recent strategies and campaigns directed at health professionals and the public to help curb antibiotic overprescribing in the UK.

Antibiotic resistance is high on the health agenda. In November 2015, European Antibiotic Awareness Day and the first World Antibiotic Awareness Week highlighted the importance of informing everyone of the issue. Prior to this, the Wellcome Trust published a report showing that antibiotic resistance is poorly communicated and widely misunderstood by the UK public. GPs find it hard to decline patients’ requests and many of the discussions with members of the public focused on their perceived need for antibiotics.¹

Most patients believe they know when they require antibiotics and hence have expectations when seeing a doctor at their appointment. However, many are unaware of what antimicrobial resistance is or find the concept difficult to comprehend. Most imagine it is the person that becomes resistant not the bacteria. Of those who do understand, many believe a solution to the problem will be found.²

The repercussions of the misuse of these drugs and the impact on the future of healthcare are huge. We may go back to an era of no effective antibiotics and common infectious diseases/simple procedures may become fatal. It is imperative that we are all aware of the problems we are facing if we are to work together to curb the rise of resistance.

The chance discovery of penicillin and the evolution and introduction of subsequent antibiotics paved the way for modern medicine as we know it. However, the pipeline for new drugs is now running dry with very few pharmaceutical companies investing in the crucial area of anti-infectives.

Government strategies
In 2013, the Department of Health published the UK Five Year Antimicrobial Resistance Strategy² with the goal of slowing the development and spread of antibiotic resistance. More recently, numerous publications (NICE guidance, National Patient Safety Agency (NPSA)
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reports and the English Surveillance Programme for Antimicrobial Utilisation and Resistance (ESPAUR) report have reiterated the plight of existing antibiotic therapies available to us and highlighted the strategies available to maintain effective usage of our current agents.

In July 2014, the government commissioned the Review on Antimicrobial Resistance, chaired by Jim O’Neill, which outlined strategies to bring the threat under control. The review projected that drug-resistant infections could cost the global economy $100 trillion and estimated the death toll from resistant organisms to be about 10 million people a year around the world by 2050, making it the biggest cause of death above cancer. To most, these figures seem abstract and unbelievable.

The 2015 ESPAUR report highlighted that the majority of antibiotics in England (74 per cent) are prescribed in general practice. Overall, the total consumption of antibiotics in England (measured as defined daily doses per 1000 inhabitants per day) increased by 6.5 per cent between 2011 and 2014. Prescribing by dentists decreased by 2.8 per cent but general practice consumption increased by 6.2 per cent and secondary care prescribing for inpatients increased by 11.7 per cent.

We need to reduce the number of antibiotics prescribed and a number of initiatives have been put in place to do just this, namely the NHS England’s Quality Premium, which rewards CCGs for improvements in the quality of their services.

Changing behaviour

However, a change in behaviour is needed. To reduce antibiotic use in England, a comprehensive interdisciplinary and multimodal approach using behavioural interventions targeted at both health professionals and the public is required.

Research conducted by the Wellcome Trust on the public’s perspective of antibiotic resistance identified four key points for consideration:

- The current language needs to change – antibiotic resistance is meaningless to the general public and antibiotic resistance does not confer the right message. Changing the term to “antibiotic-resistant infections” may have a greater impact.
- The focus for the general public needs to shift from total number of deaths, the cost to the economy and global epidemics to more recognisable problems such as superbugs, e.g. MRSA, and the illnesses they can cause, how resistance may affect common simple surgical procedures and the impact that antibiotics have on the gut and “good bacteria”
- There is a definite need for a communications campaign for the public to make the issue feel real and relevant, so that the concept of antibiotic resistance is relatable. Helping the public to understand that you can be unwell but not require antibiotics and to understand the concept of resistance and how it may affect them individually in the future can only be beneficial.
- Prescribers are key – there is a need for a behaviour change and clear guidelines and targets on when to prescribe antibiotics, as well as advice on how to manage patients.

To achieve these aims, we need to improve education and training regarding antibiotic resistance, continue to promote the Antibiotic Guardian campaign (antibioticguardian.com), think of novel ways of relaying the message and increasing general awareness of antibiotic resistance, and continue to deliver effective public health education.

Conclusion

The Review on Antimicrobial Resistance commissioned by the government described antimicrobial resistance as a looming global crisis, which could be averted if action is now taken. Bacteria are not limited by geographical boundaries and modern day travel between different parts of the world means that resistant pathogens spread more easily and quickly. Hence a co-ordinated, multifaceted approach by all nations is required to avert the pending crisis.

At a local level and closer to home, we need to educate patients to help them understand the natural course of common viral illnesses and the fact that antibiotics do not work against these infections as well as helping them to manage self-limiting infections symptomatically.

References


Declaration of interests

Shilpa Jethwa has received fees for an advisory board meeting from MSD.

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