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Superbug rampant in 'dirty' hospitals

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A microbiologist has called for an urgent overhaul of hospital hygiene to stop the spread of a bacteria that has developed multi-drug resistance and infects thousands of patients a year.

Dr Ho Pak-leung, president of the University of Hong Kong's Carol Yu Centre for Infection, says cleaning methods are decades out of date.

He says that the rapid increase in infections - from just one or two a week in 2006 to 3,000 a year - may be due to doctors prescribing too many antibiotics.

Another factor is the increasing number of old and seriously ill patients being treated in hospitals.

Acinetobacter, a genus of bacteria commonly found in soil and water, poses little risk to healthy people. It preys on those with poor immunity and most commonly strikes the lungs or chronic wounds.

'It is most serious when it causes infection in the blood [septicaemia],' Ho said.

Acinetobacter baumannii accounts for about 80 per cent of acinetobacter infections. It is spread through person-to-person contact or contact with contaminated objects. Patients staying in neurosurgery units and those undergoing emergency surgery are at a higher risk of being infected.

Such infections do not occur as often as methicillin-resistant Staphylococcus aureus (MRSA), another superbug which the Hospital Authority sees in 9,000 patients a year. Ho estimates that the number of acinetobacter infections is a third those of MRSA. However, this is already a significant increase from four years ago.

Also, acinetobacter infections are more difficult to treat because there are few drugs available with which to fight it.

Ho has studied the records of four hospitals where at least 100 patients were infected between 2008 and 2009. He found that between 33 and 46 per cent had developed drug resistance to imipenem - the most potent class of antibiotic.

'This is very serious. If it has resistance to imipenem, it is basically resistant to other antibiotics,' Ho said.

Before 2005, drug resistance was only seen in fewer than 1 per cent of infected patients. A year later, 1.7 per cent of 948 infected patients were resistant to imipenem, and 8 per cent of patients had developed resistance to at least four classes of antibiotics.

These patients were found in 25 wards at five hospitals, meaning that it is not possible to contain the infection by isolating patients. Also, the search for a new drug has not been fruitful. Hopes were high for a drug called tigecycline, but laboratory tests suggested it was ineffective.

'We suspect the spread of acinetobacter infection is due to unhygienic environments,' said Ho, who looked at results of cleaning audits in one hospital.

'Even if a table looks clean, this is not the case in microbiological terms. We are using cleaning methods that we were using 30 years ago.'

While bed sheets and pillow cases are changed frequently in hospitals, curtains are only changed every three months, he said. Also, even though pillowcases are changed regularly, patients can still be infected by contaminated pillows under a fresh cover.

Ho ruled out dirty hands as the cause of the outbreak, saying people were already washing their hands frequently.

He said hospital managers had to adopt more scientific methods to control the spread of bacterial infections. He urged the Hospital Authority to better monitor and control drug-resistant bacteria.

A spokeswoman for the Hospital Authority said that infection control in public hospitals was in line with international standards, with regular cleaning, waste management and ventilation. But the authority would consider Ho's suggestion.