Medical audit

Patient perceptions of MRSA

Sally MA Hamour, Austin O'Bichere, John L Peters, Peter J McDonald

Department of Surgery, Northwick Park Hospital, Harrow, Middlesex, UK

Drug-resistant nosocomial infections are an increasing problem. This issue has received considerable media coverage. To our knowledge there have been no studies investigating patient awareness and perceptions of nosocomial infections. A total of 113 surgical out-patients completed a questionnaire stating whether they had heard of either superbugs or MRSA. A series of questions were asked about the source of any information; methods of transmission and prevention; the consequences of infection and their emotional response if they were to acquire MRSA. Fifty patients (44%) had heard of superbugs or MRSA mainly via the media (58%) or from hospital staff (44%). The majority would feel either angry or afraid if they acquired MRSA in hospital, but there was good awareness of both methods of infection control and the consequences of infection. From our study, we conclude that the media is at least as important as health professionals in providing information. Concerns regarding nosocomial infection may need to be addressed prior to admission.

Key words: Methicillin resistance – Drug resistance, bacterial – Hospital infections – Infection control

In the 3 months prior to the study, 103 new cases of MRSA were recorded in our hospital. This study aimed to determine the proportion of patients who were aware of this issue and their understanding of its implications and possible means of prevention.

The World Health Organization's report on infectious diseases warned that the level of resistance to drugs used to treat common infectious diseases is reaching crisis point.¹ At any one time, more than 1 in 10 acute hospital patients has a hospital-acquired infection.² Resistant and multiresistant organisms are particularly important as a cause of nosocomial infection,³ and are often difficult and expensive to treat, particularly methicillin-resistant *Staphylococcus aureus* (MRSA).⁴ This has been the subject of considerable comment and debate in the popular press.

A search of the *British Newspaper Index* January 1998 to December 1999 using the search terms MRSA, superbug,

hospital-acquired infection and antibiotic resistance revealed 28 articles of which 25 used the term 'superbug'. Much of this coverage has been of a sensationalist nature (Table 1).

In contrast, a Medline search 1966 to May 2000 using the search terms MRSA, surgery, superbug, public awareness, antibiotic resistance and drug resistance revealed no studies investigating public awareness of the problems of antibiotic resistance in hospitals.

Patients and Methods

Between April and June 2000, 116 surgical out-patients attending for pre-admission clinics or flexible cystoscopy completed a questionnaire enquiring whether they had heard of either superbugs or MRSA in hospitals. Those who responded positively went on to answer a series of

Correspondence to: Dr S Hamour MRCP, c/o Liverpool School of Tropical Medicine, Pembroke Place, Liverpool L3 5QA, UK
E-mail: sallyhamour@hotmail.com

Table 1 Newspaper headlines associated with 'superbugs'

Superbug Wars	<i>The Financial Times</i> , 4 September 1998, p 17
Antibiotic fails to save US 'Superbug' Patient	<i>The Daily Telegraph</i> , 18 February 1999, p 15
Marching on, Superbug that knows no fear	<i>The Daily Mail</i> , 3 August 1998, p 29
Doctors Losing Superbug Battle	<i>The Times</i> , 24 June 1998, p 5
Superbug defies Antibiotics	<i>The Times</i> , 23 April 1998, p 1
Superbug Attacks 17	<i>The Daily Telegraph</i> , 1 August 1998, p 8
Superbug is on rampage in hospitals says expert	<i>The Mail on Sunday</i> , 29 August 1999, p 37
Hospitals on Alert over Superbug that defies Drugs	<i>The Daily Mail</i> , 7 September 1999, p 19
Drug-Resistant Superbug Kills 4	<i>The Independent on Sunday</i> , 29 August 1999, p 1
March of the Superbug	<i>The Daily Mail</i> , 18 June 1999, p 29

questions regarding their source of information; their understanding of preventative measures and the consequences of infection. In addition, their emotional responses to the possibility of MRSA infection in hospital were sought. After completing the questionnaire, patients were offered an information sheet about MRSA.

Results

A total of 113 patients with a median age of 67 years (range, 21–89 years) participated in this study of whom 97 (86%) were male. Fifty patients (44%) had heard of either superbugs or MRSA. Of these, 14 (28%) had acquired information from hospital staff, 21 (42%) from the media and 8 (16%) had heard of it from both sources. Eleven (22%) had acquired information from friends and family as either the sole source of information or in addition to other sources and one patient had heard about it from another patient.

Thirty-four patients (68%) correctly identified MRSA or superbug as a multiresistant bacterium and 35 (70%) believed that it could be acquired from the 'hospital environment'. Seventeen (34%) thought that it could be contracted from operations or other procedures and 4 (8%) from hospital staff. Nine patients (18%) were unsure how it could be acquired but 22 (44%) knew that antibiotic-resistant organisms existed in the community as well as in hospitals.

Patients' reaction to the possibility of acquiring MRSA revealed that 26 (52%) would feel afraid and 19 (38%) would feel angry. Only five (10%) patients would not be concerned and none would feel ashamed. The reasons for feeling angry or afraid were interesting and varied (Table 2).

In assessing the perceived effectiveness of infection control measures, 27 (54%) thought hand washing was important. A similar number of patients, 22 (44%) and 21 (42%) believed gloves/aprons and isolation rooms, respectively, helped to prevent transmission. A single patient (2%) thought there was no known method of controlling spread while 12 (24%) were unsure.

Table 2 Some responses to the possibility of acquiring MRSA

There is no known way to treat it
I would hope that a hospital ward would protect me
I would be afraid of spreading it to others
I would not be responsible for getting it
It can kill you
It cannot be treated
I think it could be prevented
I wouldn't expect to acquire MRSA after a routine operation
Lack of hygiene

A large number of patients felt the possible consequences of MRSA infection to be significant with 23 (46%) identifying wound infection, 19 (38%) major illness and 11 (22%) delayed discharge as potential problems. Only 4 (8%) thought there were no consequences of infection.

Discussion

Despite considerable and often sensationalist media coverage, less than half of patients (44%) had prior knowledge of superbugs or MRSA. Of these, the media was, perhaps unsurprisingly, the most frequent source of information. However, it is re-assuring, although not entirely satisfactory, that 44% had gained information from hospital staff. The number of patients gaining information from within the hospital may be high in our sample because many were regular attenders for flexible cystoscopy.

In spite of the nature of the media coverage often devoted to antibiotic resistance and hospital-acquired infection, patients were generally well informed about methods of transmission and consequences of infection. However, it was clear that the possibility of infection generated a wide range of strong emotions. Patients in general felt that their health could be threatened and that hospitals failed to protect them adequately. Some were even angry that it implied a lack of hygiene in hospitals. Greater access to accurate information and open channels

of communication between patients and hospital staff are required in order to address these issues.

Conclusions

Better surveillance, early diagnosis and education of patients and hospital staff are all required to prevent transmission of MRSA.⁵ Perhaps the most important finding from this study is the high level of anxiety that MRSA infection would provoke amongst patients. These emotions need to be recognized so that patient concerns about nosocomial infection can be addressed in future health initiatives.

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