Revised guidelines for the control of MRSA in hospitals

The first report of a combined working party of the Hospital Infection Society and the British Society for Antimicrobial Chemotherapy on methicillin-resistant *Staphylococcus aureus* (MRSA) (Report of a combined working party of the Hospital Infection Society and the British Society for Antimicrobial Chemotherapy, 1986) was revised in 1990 (Report of a combined working party of the Hospital Infection Society and the British Society for Antimicrobial Chemotherapy, 1990) and commended to the NHS in 1994.

Sustained zealous interpretation of these guidelines and repeated costly intervention such as ward closure became unacceptable in the 1990s, particularly as resources in the NHS were stretched and, in surgery at least, dependent on activity. Support from clinicians and managers waned and infection control teams (ICTs) targeted their efforts to areas where clinical problems were greatest. Local experience was matched on a national scale by an inexorable rise in cases and numbers of hospitals affected by epidemic MRSA 15 and 16 strains, which are now endemic in many hospitals.

THE NEED FOR REVISED GUIDELINES

Guidelines written to address 'outbreak' situations did not suit environments where MRSA had become endemic. ICTs became uncomfortable when pressure from management and clinical colleagues, and in many cases their own judgment, moved local practice beyond the limits of the guidelines. The working party, now augmented by representation from the Infection Control Nurses Association, reconvened and published revised guidelines in 1998 (British Society for Antimicrobial Chemotherapy, Hospital Infection Society and the Infection Control Nurses Association, 1998).

This report is considerably longer than its predecessor and is in two parts. Part one provides a useful review of three areas — current epidemiology, the clinical importance of MRSA and the associated costs (including the costs of control), and a lengthy commentary on aspects of MRSA control in hospitals, including, crucially, the evidence for efficacy of control measures. This will be welcomed as a convenient reference to the scientific literature and the arguments put forward will be useful ammunition for ICTs in agreeing local policies.

Justification for attempts to control MRSA now occupies 12 pages (as opposed to 2 pages in 1990). The message is that uncritical adoption of the actions advocated in part two (practical guidance) can no longer be assumed.

GUIDELINES AS GOSPEL?

There are dissident microbiologists who share awareness of the literature (and therefore found part one redundant) and claim considerable hands-on experience, but who reject some of the arguments put forward for control efforts (Barrett et al, 1998; Rahman et al, 1999).

That MRSA in an important nosocomial pathogen is not disputed but it is not the only one; methicillin-sensitive *Staph. aureus* alone causes more infections. Although there is evidence for (often short-lived) control of discrete outbreaks, the arguments that control measures achieve a sustained reduction in incidence where MRSA is endemic rests mainly on selective international comparisons which are disputed.

The steadily rising incidence of MRSA in the UK is hard to reconcile with effective control in the past, and sits uncomfortably with the selective relaxation of effort which is the outcome of the clinical area risk assessment proposed in the new guidelines. Also, many of the cost elements relate to control measures or hospital acquired infection in general — a notable exception being glycopeptide use.

LINKING GUIDELINES TO CLINICAL PRACTICE

Ranking clinical areas by the degree of risk to patients (e.g. considering surgical wards as high risk areas and psychiatric wards as minimal risk areas) and tailoring the number and intensity of application of control measures accordingly is an interesting concept. Unfortunately the differences between high and moderate or moderate and low risk categories are small.

Second contemporary clinical practice has blurred simple distinctions into 'medical', 'surgical' wards, etc — 'orthopaedic' patients with fractured neck of femur may go from the accident and emergency department to theatre and then to a rehabilitation ward with a mix of patients and never see an orthopaedic ward. Many ICTs adopted a 'risk assessment' approach some time ago and the guidelines legitimise this pragmatism. Both they and the guidelines live with the awkward consequence that this approach favours the development of an MRSA reservoir in lower risk areas from which patients re-circulate to high risk areas.

The practical guidance section develops the risk-based stratification of clinical areas and distinguishes hospitals without endemic MRSA, where 'search and destroy' may still be appropriate, from MRSA-endemic hospitals. Much of the detail is familiar and unchanged from 1990 (e.g. for patient isolation) but contemporary issues such as the use of glycopeptides for surgical prophylaxis are also addressed.

The classification of recommendations by the weight of evidence/opinion supporting them is revealing. Only a small proportion (perhaps 10%) of the recommendations are 'supported by well designed experimental or epidemiological studies'; the large majority are based on 'expert' and working party consensus opinion and, as the dissidents have pointed out, opinion may vary (Rahman et al, 1999). The application of a 'clinical effectiveness' analysis to infection control may threaten or embarrass some, but is probably overdue and cannot be resisted by those who see themselves as part of a scientific discipline.

MRSA is clinically important but eradication is not a realistic aim. The 1998 guidelines move the envelope of acceptable practice to accommodate the pragmatic approaches which many ICTs see as appropriate responses to an endemic problem. Proof that individual recommendations are effective or that the package reduces the magnitude of the problem is lacking. HM

KEY POINTS

- A second revision of guidelines for the control of methicillin-resistant *Staphyloccus aureus* (MRSA) in hospitals was published in 1998.
- This incorporates a substantial summary of current epidemiology, the clinical importance and costs of MRSA and justification for control measures.
- Infection control teams are advised to target interventions and effort according to the risk to patients in high, moderate, low and minimal risk clinical areas.
- Individual control strategies are essentially unchanged and dealt with in detail. The weight of scientific evidence/opinion supporting them is indicated.
- Reference is made to challenges to some of the arguments justifying the guidelines.

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Barrett S, Mummery R, Chattopadhyay B (1998) Trying to control MRSA causes more problems than it solves. *J Hosp Infect* **39:** 85–93

British Society for Antimicrobial Chemotherapy, Hospital Infection Society and the Infection Control Nurses Association (1998) Revised guidelines for the control of methicillin-resistant *Staphyloccus aureus* infection in hospitals. *J Hosp Infect* **39:** 253–90

Rahman M, Sanderson P, Bentley A et al (1999) Revised guidelines for control of MRSA in hospitals: finding the most useful point. *J Hosp Infect* **42:** 71–2

Report of a combined working party of the Hospital Infection Society and British Society for Antimicrobial Chemotherapy (1986) Guidelines for the control of methicillin-resistant *Staphyloccus aureus*. *J Hosp Infect* **7:** 193–201

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For comments on this editorial, please see p. 67