

Interim Working Party Guidance on the Control of multi-resistant *Acinetobacter* Outbreaks.

Background

Many hospitals in England are encountering problems with multi-resistant *Acinetobacter* spp. Attempts to limit the spread of such strains have led to calls for interim and more definitive guidance on control. In the absence of national guidance and a systematic review of the subject, the guidance below has been developed rapidly by a working group representing the Association of Medical Microbiology (AMM), British Society for Antimicrobial Chemotherapy (BSAC), Health Protection Agency (HPA), Hospital Infection Society (HIS), Infection Control Nurses Association (ICNA) and Department of Health (DH) to address this problem. The group intend to explore views on this guidance and also local data which may provide supporting evidence for effective interventions.

Definitions

These vary in the literature. The working party have defined multi-resistant *Acinetobacter* spp “MRAB” as *Acinetobacter* spp. isolates that are resistant to any aminoglycoside (e.g. gentamicin) AND to any third generation cephalosporin (e.g. ceftazidime, cefotaxime). An even more multi-resistant *Acinetobacter* spp designated “MRAB-C” is defined as an MRAB that is also resistant to carbapenems (imipenem or meropenem). There are rarer strains that are resistant to all aminoglycosides and sensitive to carbapenems and others that are also resistant to colistin.

Antibiotic prescribing policies and audit should be in place for the treatment of these infections, but we are aware that this is not the case for some Infection Control Teams. Furthermore, there may be no perceived need for these measures, provided at least one aminoglycoside and a carbapenem are still active against the strain(s). Infection control teams in some other countries certainly take these more susceptible isolates seriously.

Guidance for MRAB and MRAB-C Incidents

- Where a single patient is found to be positive, then ideally s/he should be isolated in a side-room and infection control and antimicrobial prescribing reviewed (see below). Risk assessment of the case should be performed and numbers and results of clinical specimens from other patients on the ward/unit reviewed to inform whether screening of other patients is indicated.
- Risk factors for colonisation or infection should be reviewed, including intensive care or burns unit admissions, prolonged length of hospital stay, surgical and other wounds, broad spectrum antibiotic treatment including carbapenem usage (see below), urinary and vascular catheters, ventilation and parenteral nutrition.
- Where there is more than one patient isolate, conduct an investigation, agree case definitions and record time, place and person details of all infected and colonised patients.
- Perform regular outbreak meetings with all relevant Healthcare workers to feedback key information, review the success of interventions and make new plans, as appropriate. Choice of antibiotic will normally be governed by local information about trends in antibiotic resistance or a known sensitivity of the organism. A cluster of MRAB should trigger a review of antibiotic prescribing. Efforts should be made to minimize antimicrobial use in general and broad spectrum agent use in particular. Specific recommendations regarding restriction of named antibiotic

classes, such as carbapenems for MRAB-C, may be appropriate in some circumstances, but will need local assessment and review.

- Agree patient and environmental screening strategies, which should include monitoring the effectiveness of interventions.
- Discuss with the Reference Laboratories the sending of appropriate isolates for typing to explore epidemiological hypotheses and the success or otherwise of interventions.
- Perform risk assessment of all cases and agree an isolation strategy and any other interventions with all relevant HCWs: Note that several UK centres have cohort-nursed patients with designated nursing and even physiotherapy staff.
- Review all infection control procedures and re-enforce or correct these, including hand hygiene, correct use of gloves and device usage.
- Instruments or equipment (e.g. writing materials, sphygmomanometers, stethoscopes, lifting slings, resuscitator bags) should be designated for affected patients. If possible, single-patient use items are to be preferred, if not, such items should be suitably decontaminated before use on another patient. Special attention should be paid to ventilator circuits, suction catheters and humidifiers. A cluster of MRAB cases should trigger an audit and review of these measures.
- The area the patient was cared for should be cleaned after the patient's discharge according to the local disinfection policy, with special attention to horizontal surfaces and dust-collecting areas, bedclothes, curtain rails, beds, tables, ventilators, sinks, doorknobs, telephones and computer keyboards. All unused disposable items should be discarded (stocks of these should thus be kept to the minimum needed for care of that patient).
- A decision on whether a disinfectant is needed should be made by the Infection Control Team: chlorine-based agents (e.g. NaDCC) at 1,000 ppm available chlorine with a compatible anionic detergent if required can be recommended. In case of corrosion problems, 70% alcohol can be used.
- Pillows, mattress covers and mattresses should be checked for damage and similarly disinfected. Therapy beds need specialist cleaning (e.g. high quality thermal washing/disinfection). Special mattresses must be cleaned according to manufacturers' instructions after patient use.
- Where cases are continuing, consider closing ward and performing thorough decontamination of the environment and all equipment.

Further useful information can be found on:

http://hopkins-heic.org/infectious_diseases/acinetobacter.html

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