Editorial

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Burns units: A breeding ground for all three 'critical priority' bacteria in need of new antibiotics recently identified by the World Health Organization

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On 27 February, the World Health Organization (WHO) published a list of antibiotic-resistant organisms,[1] prioritising them according to 'critical', 'high' and 'medium' priority.

There were three organisms on the critical list:

- Acenitobacter baumannii (carbapenem resistant);
- Pseudomonas aeruginosa (carbapenem resistant); and
- Enterobacteriaceae (carbapenem-resistant, ESBL producing).

All three organisms are familiar and, indeed, increasingly common in burns units across the world. The extended healing times for major burns, combined with life-or-death requirements for continued antibiotic treatments that can be difficult to withdraw, make burns units the breeding ground for all these multi-resistant organisms. A number of burns unit outbreaks published in international peer-reviewed journals highlight the impact of shutting down services due to the outbreak of organisms such as acenitobacter, and the difficulties in managing them.[2]

There is an urgent need for coordination at national and international levels between public health, infection control, microbiology and burns services with a view to strategic planning and direction of multidisciplinary research in burns units. Large scale and heavily resourced research programmes that include multinational and multimodal collaborations using potential ancillary antimicrobial strategies ranging from phage therapy[3] and anti-biofilm technologies to light therapies and other novel or variant topical antimicrobials remain sparse and underpowered. Major incidents involving mass casualties including burns, and hence large numbers of patients that put pressure on capacity and cross-infection measures, look increasingly likely on the current geopolitical stage, further increasing the likelihood of emerging pan-resistant organisms.

There is no coordinated information-gathering exercise or audit of microbiology trends across burns services in the UK, and for which there is an urgent need, to further inform and develop the foundations for a better understanding of the problem, facilitate action and join together the relevant agencies to tackle this problem.

Knowledge is power. The time is now.

References

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