

Cosmetic products may cause fatal infections in critically ill patients

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Healthy consumers can handle the low levels of bacteria occasionally found in cosmetics. But for severely ill patients these bacteria may trigger life-threatening infections, as patients in the intensive care unit at one Barcelona hospital discovered after using contaminated body moisturiser. The *Burkholderia cepacia* bacteria outbreak is detailed in the open access journal, *Critical Care*.

Five patients suffered from infection including bacteremia, lower respiratory tract infection and urinary tract infection associated with the bacterial outbreak in August 2006. Skin care products sold in the European Union are not required to be sterile, but there are limits to the amount and type of bacteria that are permitted.

The Hospital Universitari del Mar, Universitat Autònoma de Barcelona's routine infection control surveillance pinpointed the unwelcome bacteria in five patients' biological samples. Researchers tested a number of environmental samples, and discovered that moisturizing body milk used in the patients' care was a *B. cepacia* reservoir. Pulsed-field gel electrophoresis experiments confirmed that all of the strains of *B. cepacia* bacteria found in patient and environmental samples were from the same bacterial clone. Tests on sealed containers of the moisturizer confirmed that the bacteria had not invaded the product after it had been opened, but that it was contaminated during manufacturing, transportation or storage.

“This outbreak of nosocomial infection caused by *B. cepacia* in five

severely ill patients supports a strong recommendation against the use of cosmetic products for which there is no guarantee of sterilization during the manufacturing process,” says study author Francisco Álvarez-Lerma.

B. cepacia is a group or “complex” of bacteria that can be found in soil and water. They have a high resistance to numerous antimicrobials and antiseptics and are characterised by the capacity to survive in a large variety of hospital microenvironments. These bugs pose little medical risk to healthy people. However, those with weakened immune systems or chronic lung diseases, particularly cystic fibrosis, may be more susceptible to *B. cepacia* infection. *B. cepacia* is a known cause of hospital infections.

Source: BioMed Central

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