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Reduction of healthcare-Associated infections in a long-term care brain injury ward by replacing regular linens with Biocidal copper oxide impregnated linens

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Abstract

Background:

Contaminated textiles in hospitals contribute to endogenous, indirect-contact, and aerosol transmission of nosocomial related pathogens. Copper oxide impregnated linens have wide spectrum antimicrobial, antifungal and antiviral properties. Our aim was to determine if replacing non-biocidal linens to biocidal copper oxide impregnated linens would reduce the rates of healthcare-associated infections (HAI) in a long-term care ward.

Methods:

We compared the rates of HAI in two analogous patients' cohorts in a head injury care ward in two 6-months parallel periods before (Period A) and after (Period B) replacing all the regular non-biocidal linens and personnel uniforms with copper oxide impregnated biocidal products.

Results:

During Period B, in comparison to Period A, there was a 24% reduction in the HAI per 1000 hospitalization days (HD) ($P<0.05$), a 47% reduction in the number of fever days (>38.5°C) per 1000 HD ($P<0.01$), and a 32.8% reduction in total number of days of antibiotics administration per 1000 HD ($P<0.0001$). Accordingly there was a 19.8% and 25% reduction of antibiotics and disposable products expenses per 1000 HD, respectively, during period B.

Biography

Dr. Gadi Borkow obtained his Ph.D. degree on Biochemistry from the Tel Aviv University, Israel on 1994. His post-doctoral studies were conducted at McGill University AIDS Centre between 1994 to 1997, during which he specialized on Human Immunodeficiency Virus Type 1(HIV-1). In 1998 Dr. Borkow joined the Hebrew University Institute of Immunology and AIDS Center, where he studied virological and immunological aspects of HIV-1 infection, and development of HIV-1 antiviral drugs and microbicides. Since 2002 Dr. Borkow is the Chief Medical Scientist of Cupron. Dr. Borkow serves in the Editorial Board of several scientific journals. Dr. Borkow has published over 100 peer reviewed manuscripts in scientific journals, and his studies have been presented in more than 80 scientific conferences.