Incidence and prevention of resistant microorganisms in Greenland 2000 - 2011

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Background

In 1998 the health care system in Greenland signed a contract with National Center for Infection Control concerning guidance on infection control and prevention. The following has been established and performed on a regular basis:

- Hygiene committee
- Key infection control persons
- Guidelines for infection control and prevention
- Point prevalence studies
- Hygienic and antibiotic audits
- A laboratory surveillance system of resistant microorganisms in 2000
- Mandatory national report system

Methods

Review of the surveillance database, record review of colonized and infected patients in order to identify: epidemiology, etiology, antibiotic therapy, compliance to standard isolation precautions, and routine screening.

Results

Findings September 2000 to January 2011

5 *Clostridium difficile* 027
- 5 patients hospitalized in Denmark

12 Extended spectrum B-lactamase (ESBL) - producing *Enterobacteriacea*
- 7 patients hospitalized in Denmark

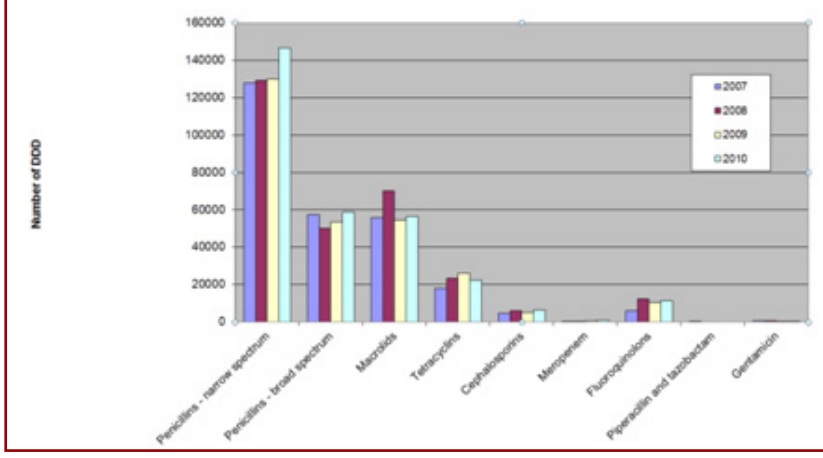
6 Methicillin-resistant *Staphylococcus aureus* (MRSA)
- 1 patient hospitalized in Austrialia
- 1 patient from the Philipphines

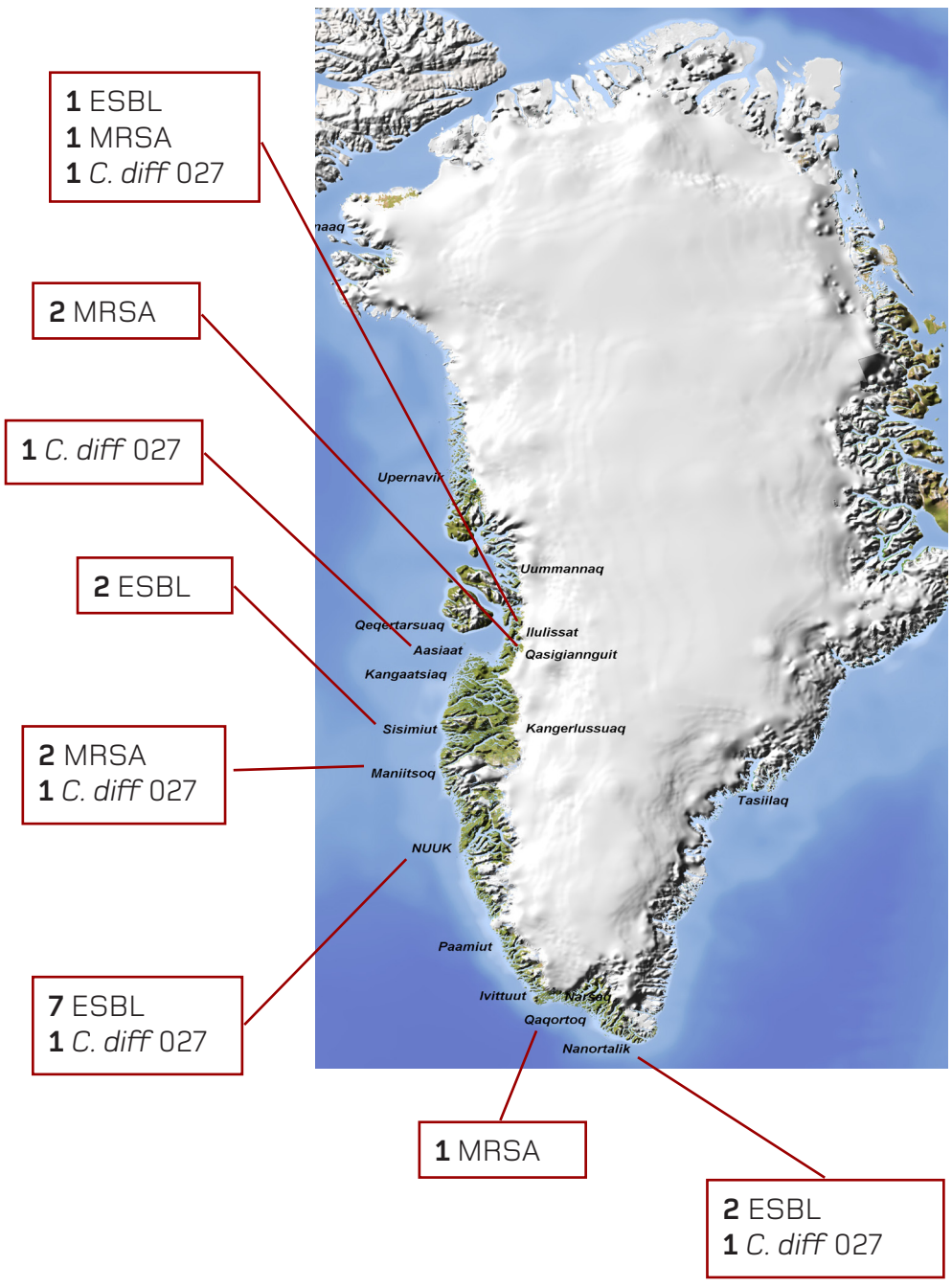
Besides the 6 local patients, 4 foreigners were diagnosed with MRSA: 3 from a Canadian trawler and 1 from an American research vessel while in Nuuk harbour.

Risk factors

- Immunosuppression (cancer and chronic diseases)
- Prior antibiotic treatment (cephalosporins, quinolones)
- Surgical procedures
- Foreign bodies (urinary tract catheters)
- Admissions to hospitals abroad (primarily Denmark).

Use of antibiotics in Greenland – DDD





Conclusions

During the last few years there has been an increasing number of resistant and virulent microorganisms in Greenland, although the number is still low. The increase in resistance can partly be explained by the increase in consumption of broad spectrum antibiotics as cephalosporins and fluoroquinolones. To keep a low incidence one must focus on:

- A proactive approach
- An ongoing surveillance
- A rational use of antibiotics eg. decreased use of ceftriaxon and ciprofloxacin
- Compliance to screening procedures
- Compliance to guidelines for infection control and prevention (hand hygiene, cleaning, disinfection, isolation, personal protective equipment).

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