Abstract

- Title: Changes in oral flora in hospitalized patients
- Background: The normal body exists in mutualistic balance with a large range of microbiota. When hospitalized or ill, this balance can be disturbed. Opportunistic bacteria may thrive in areas they normally do not inhabit, for example in the oropharyngeal tract. Nosocomial pneumonia is believed to be caused by micro-aspiration of pathogenic microbes from the oropharynx into the otherwise sterile lungs. Probiotics, for example Lactobacillus plantarum can help in restoring the microbiological balance and immunological function in the human gastro-intestinal tract (1)
- Research questions: Does the oropharyngeal flora change before/during hospitalization? Are there patient factors and specific events which are associated with a change in oropharyngeal flora? Can treatment with the probiotic Lactobacillus plantarum diminish such a change?
- Methods: Oropharyngeal swabs from ward-patients and ICU-patients as well as controls have been analysed to determine the oropharyngeal flora over time. Selected groups have been orally supplemented with Lactobacillus plantarum 299 and 299v twice daily. Patient characteristics have been collected in Case Report Forms.
- Results: The main patient factor associated with an altered oropharyngeal flora is Proton Pump Inhibitors-medication prior to admission to hospital (PPI) (2). The majority of investigated ICU-patients had an altered oropharyngeal flora within 24 hours of ICU-admission. Length of hospitalization is associated with an alternation of the oropharyngeal flora in ward-patients. Antibiotic treatment and chronic PPI treatment are associated with alteration of the oropharyngeal flora during hospitalization.

Results from the intervention with lactobacilli-supplementation are yet to be determined.

- Preliminary conclusion: By determining contributing factors among patients, we might be able to better prevent and treat a change in oropharyngeal flora and subsequently diminish the risk of nosocomial pneumonia. Treatment with Lactobacillus plantarum may help prevent a change in oropharyngeal flora in hospitalized patients.

References

