

THE SPRING-FALL VARIATIONS IN THE PREVALENCE OF ENVIRONMENTAL MYCOBACTERIA IN DRINKING WATER SUPPLY SYSTEM

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SUMMARY

The fluctuation in the prevalence of environmental mycobacteria in relation to nutritional conditions in nature was repeatedly described in literature. The seasonal difference in potable water supply system has not yet been documented. Potable water samples from water supply systems of 16 localities were analyzed. The samples of running water, and tap swabs or tap scrapings were collected twice a year, in the spring and in the autumn. McNemar's test was used to analyze the difference of the occurrence of environmental mycobacteria between the vernal and the autumnal samples. A significant change in the presence of environmental mycobacteria in the potable water supply system was observed: the vernal samples yielded more positive results. This finding supports other observations of superficial water. We infer that this effect in potable water supply system may be caused by the change in temperature. Contamination rates were similar with no statistically significant difference between running water samples and that of swabs or scrapings. No time trend in the period 1984-1989 in the prevalence of mycobacteria was detected. Direct microscopy showed massive colonisation with environmental mycobacteria of potable water supply system. Public health consequences of these findings should be further evaluated, as colonisation of water pipes can be associated with outbreaks of mycobacterial disease in immunocompromised patients. There has been also an increase in the incidence of mycobacterioses in North Moravian Region in recent years.

Key words: mycobacteria, seasonal variation, drinking water

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