THE EFFECT OF LOCAL THERMONEUTRAL MUD AND PEAT APPLICATION ON THE SKIN HYDRATION MEASURED IN THE FOREARMS REGION WITH THE CORNEOMETER

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INTRODUCTION: Mud and peat differ from each other in their chemical composition. The use of warm peloids as the treatment of different skin diseases has been studied previously. The moisturizing effect of mud and peat is mainly related to humic substances. The aim of the current study was to analyse the effect of thermoneutral mud and peat applications on the skin hydration (SH).

MATERIALS & METHODS: An experimental study was performed with 50 persons in two groups. The SH measurement is based on capacitive method, and Multi Skin Test Center MC-1000 was used. Thermoneutral natural sea mud and peat were applicated on the left volar arm for 30 minutes on 10 following days and the SH level was measured before and after the last peloid application. The control data were measured on the right hand. Also, the content of humic substances was measured in both peloids. There was 2% of humic substances in mud dry matter, and 55% in peat dry matter.

RESULTS: There were subjects in both groups whose forearm SH increased or decreased after the local peloid application. There was positive dynamics in SH level in 11 subjects ($p<0.05$) in the mud group and in 7 subjects ($p<0.05$) in the peat group. The positive dynamics in SH was higher in the peat group. The negative dynamics in SH level was in 15 subjects ($p<0.05$) in the mud group and in 17 subjects ($p<0.05$) in the peat group. The difference with control hand was the same in both groups.

CONCLUSIONS: Mud and peat have very different content of humic substances but the differences in SH changes between the groups were not so big. Peat contains more humic substances and, therefore, the subjects in the peat group revealed higher positive dynamics in SH level.

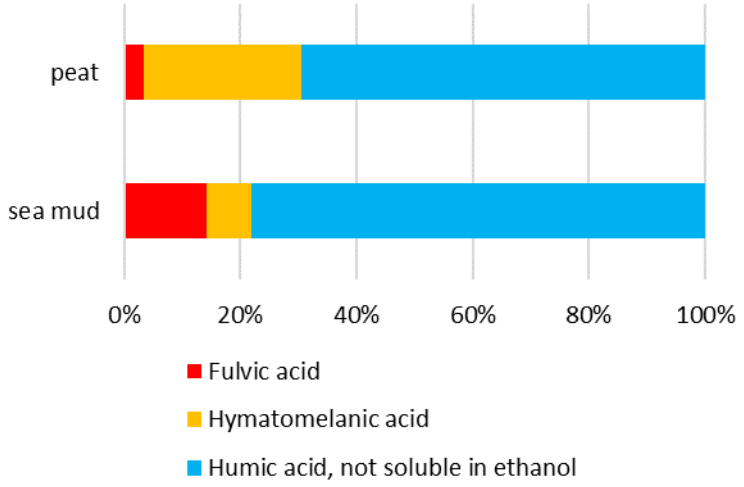

Figure 1. The content of humic substances in sea mud and peat dry matter

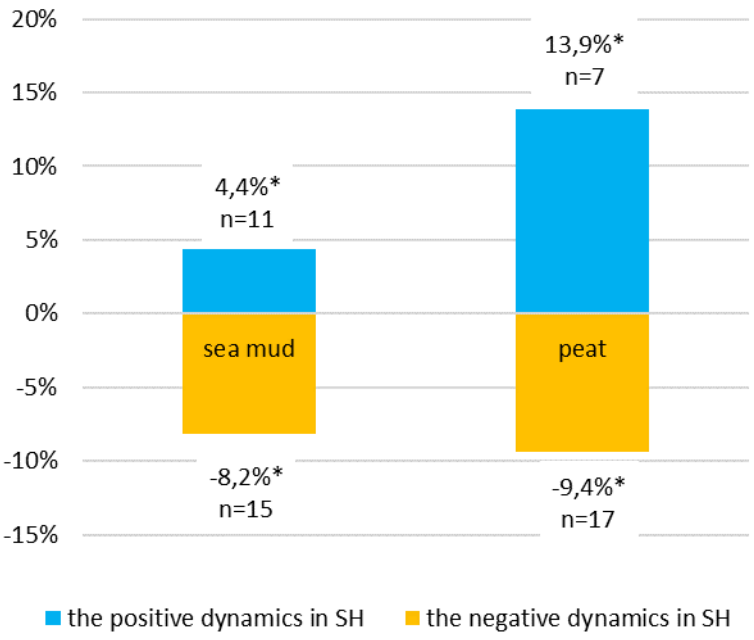

Figure 2. The dynamics in SH in different groups

Figure 3. Peloid application

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