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KEY WORD : DENTAL EROSION / PROFILOMETER/ SWIMMER EROSION

VORACHON YUKTARNONDA ; DENTAL EROSION OF THE UPPER PERMANENT INCISORS BETWEEN COMPETITIVE SWIMMERS IN STANDARD pH SWIMMING POOLS AND NON-SWIMMERS. THESIS ADVISOR ; ASSOC. PROF. AMPUT INTARAPRASONG., 97 pp. ISBN 974-334-796-8

This was an observational analytic study to compare the dental erosion of the upper permanent central incisors between 86 competitive swimmer students and 101 non-swimmer students who swam in 2 swimming pools with standard pH (7.2-8.4). These students were divided into two aged groups, 8-10 and 11-15 years old. Dental erosion was measured with clinical examinations, photographs and dental stone casts along with the average surface roughness parameter from profilometer. Student Unpaired t-tests were used for statistical analysis.

The result in all three methods of measurements were able to detect the erosion and showed that the average dental erosion from the competitive swimmer groups was more marked than that of the non-swimmer students with statistical significance ($p < 0.01$) for all the first three methods of measurements with both aged groups. Only the upper left central incisor of the photographed group had the statistical significance at $p < 0.05$. For the surface roughness method, only the 11-15 aged group in swimmers had less surface roughness at $p < 0.01$. Competitive swimmers and non-swimmers in three age groups of 8-9, 10-11, 12-15 years of age were found to have a natural trend of erosion. Anova showed that the dental erosion progressed with age and the rate of erosion is higher for the competitive swimmers than the non-swimmers.

According to the author, the dental cast method of detection of erosion was acceptable with no bias though with somewhat expensive and complicated preparations. Therefore, clinical examination performed by all dental practitioners, was the most practical and economical. So should there be any erosion detected, dentists should be aware that swimming can be one of the causes. Furthermore, making clinical examinations, inquiring into the patient's history and swimmer calculus will assist in a more accurate diagnosis.

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