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The effectiveness of matrix cauterization with trichloroacetic acid in the treatment of ingrown toenails

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Ingrown toenail is an often painful clinical condition that usually affects the big toe. Chemical matricectomy with phenol has a low recurrence rate and good cosmetic results. However, it produces extensive tissue destruction that can result in drainage and delayed healing. Alternatives such as sodium hydroxide and trichloroacetic acid (TCA) have therefore come into vogue. A total of 39 patients with 56 ingrown toenail edges underwent chemical matricectomy with 90% TCA after partial nail avulsion. In most of the patients, adverse effects such as postoperative pain and drainage were minimal. One patient who underwent matricectomy had recurrence in a single nail edge (1.8%) at 12 months follow-up. No recurrence was observed among 38 patients during the mean follow-up period. This was considered to be statistically significant (P<0.001). Partial nail avulsion followed by TCA matricectomy is a safe, simple and effective method with low rates of postoperative morbidity and high rates of success.

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Biomineralization of selected skin cancers

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nalysis of skin cancers was conducted on materials obtained from an Oncology Clinic. The samples represented mostly Λ Carcinoma basocellulare solidum. Histological preparations were made from the skin samples and used for histological observation, as well as for selecting pieces for further research using scanning microscope connected with chemical analysis (EDS method). Scanning microscopes Jeol 540 and 560, made in Japan, were used. Special attention was paid to areas of increased mineralization. It was observed that mineralization within the cancerous areas is of dual nature. Hidden mineralization manifests only as increased levels of certain elements in the chemical analysis of tissue. SEM observations indicate that the hidden mineralization consists of elements embedded in biological structures of tissue. It does not create mineralgrains or crystals in tissue. It can only be detected using sensitive chemical methods. Next to the hidden mineralization, organic-mineral micro-grains containing increased amounts of elements were observed. We may assume that those are the result of evolution (further mineralization) of the hidden mineralization, which may remain on the hidden level or evolve into the form that may be observed microscopically (SEM). Uneven distribution of the increased amounts of tested elements in the aforementioned forms confirms that they are mostly organic-mineral grains. Conducted research, which proves the presence of mineralization in cancerous tissue, shows the need for discussion: what is the order of the observed phenomena? Does the local tissue mineralization cause the modification of certain cells into their cancerous form, or do cancerous tissues have predisposition to concentrating certain elements? Co-existing of both phenomena is also possible, which hinders the interpretation of obtained results. Further research is necessary to understand this important problem.

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