INVESTIGATION OF ELECTROLYSED (KAQUN) WATER ON GROW OF HUMAN OVARIAN CARCINOMA AND HUMAN CERVIX CARCINOMA XENOGRAFTS IN SCID MICE

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Introduction:

In the present study we investigated the influence of KAQUN water consumption on the in vivo intake, and growth-kinetic of human tumor cells in xenotransplants grafted to mice with Severe

Combined Immune-deficient (SCID).

Materials and Methods: SCID mice allow routine engraftment and growth of xenogenic cells due to their abnormal humoral and cellular immune defense mechanism. Human ovarian carcinoma cells (A2780), and cells derived from human cervix carcinoma (KB-3-1) were transplanted to SCID mice in 4 x 106 and in 2 x 106 cell numbers respectively. Control mice were drinking normal water (n=9), while others received the oxygen enriched Kaqun water (n=9). One further group of animals (n=5) started to drink Kaqun water 14 days before xenotransplantation. Volume of growing xenografts was estimated 11, 17, 25 and 33 days after xenotransplantation. One mouse was sacrificed in each investigated groups on days 18 and 26 and all others on days 33 for obtaining tumors and internal organs for histological investigation.

Results: Seventeen days after xenotransplantation the volume of tumor were significantly smaller in Kaqun and pre-Kaqun group in the case of both type of tumors. We suppose that:

a./ the lower death rate

b./ the decreased tumor take

c./ the decreased growth kinetic in Kaqun water consuming groups and

d./ the tendency of tumor-regression observed at 5 of the Kaqun water treated mice might be the consequence of the changed tissue oxigenisation. Histological investigation of the growing tumors stated that Kaqun resulted in a high apoptotic activity and damaged tumor cells, which correlates with the clinical data.

Conclusion: The studies about Kaqun water began 20 years ago in USA and have been perfected in Hungary. This particular water is produced through a sophisticated technological process of electrolysis: it is the only one in the world which contains bioavailable and stable oxygen (long term) in an amount from 15 up to 26 mg / liter. It is alkaline with a pH medium value from 7.8 to 8.2. It remains stable for over one year under standard conditions and it is able to increase oxygenation level of body tissues preventing Warburg effect.