Conclusion

Acupuncture application postoperatively for the animals of traumatic neuritis of the trigeminal nerve of the toxic genesis contributes to the significantly reduction of pyoinflammatory complications. This fact is the base to continue the experimental and clinical examinations of this kind and elaboration of the new methods of postoperative treatment of patients with toxic injuries of the inferior alveolar nerve during which the acupuncture should be considered not only as the treatment method but the propylaxis one as well.

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STUDY OF RESULTS OF MICROCRYSTALLIZATION INDICES CORRELATION IN DIFFERENT BIOLOGICAL FLUIDS. EXPERIMENTAL AND CLINICAL CASE

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Introduction

One of the new methods of diagnostics and prognostication of our days is the functional morphology of the biological fluids. [1,2,3]. It is based on the analysis of the morphological picture of crystal and amorphous structures in the dehydrated biological fluids (BF). Phase change of BF into the solid state gives possibilities to fix molecular correlation in this difficult system and make their examination easier [5]. Totally, this method allows not only to evaluate effectiveness of performed prophylaxis, treatment and rehabilitation procedures but to prognosticate pathological processes and possibilities of there development [4].

But, there is no objective proofs for correlation of microcrystallization data of different biological fluids of the serum of blood (SB), oral fluid (OF), urine and exudation of the wounds for the experimental animals and SB, oral fluid and urine for men.

Aim of work was to make scientific bases for the oral fluid microcrystallization as the common indices of the human body homeostasis according to the comparative assessment of the microcrystallization data of the biological fluids for experimental animals and people.

Materials and methods

We examined 10 experimental animals of rabbits males of Shinshilla breed of the same weight and age and 10 persons (males) at the age of 18-25 years old. We depilated the back skin 2,5x2,5 cm of area and made the cut 1,5 cm of length under the local anesthesia. We cut the skin, under skin sellular tissue till the fascia and then we made 3 interrupted sutures with vicril 3/0. the wound was treated with 1% Solution brilliant green.

Three biological fluids (serum of blood, oral fluid, urine, wound exudation) were examined for microcrystallization for all patients. These biological fluids were taken at the same time of the day and for every animal and people.

Blood sampling was taken from the elbow veins of the people and marginal elbow of the ear of the animals. Than it was separated for serum and pellet fraction during the centrifugation within 10 minutes by 3000 turns/min. The oral fluid sampling was made with microdispenser from the oral cavity directly. The urine was placed into the sterile test-tubes. The wound exudation was taken during the experiment with the sterile eye pipette passing between the sutures deep into the wound. All biological fluids were put on the object-plate with the pipette doser by three drops, each volume was 0,01 ml. The samples of the biological fluids were dried under the room temperature in horizontal state than they were examined with the stereoscopic micro-scope. We took for examination the drops which microcrystallization picture was met more that two times.

The first type of microcrystallization was presented by the elongated of prismatic form crystalline structure, with radial orientation more often. The second type looked like isothermally placed crystals without clear orientation. Third type was presented by small isolated, single and non-aligned crystals.

We have analyzed 210 samples of biological fluids during this examination what corresponds to 70% of the total quantity of samples.

Results

During the examination we did not identified the I type of crystal organization according to the results of the serum of blood samples examination. II type was identified in 30% of cases and the III type was found in 70%.

Oral fluid indices confirmed that the I type of microcrystallization was found in 10% of examinations, II type – in 50% and the III type – in 40% of the people that we examined.

Results of the graining in urine confirmed that the I type was not found, II type was fixed for 40% of the experimental animals, III type – for 60%.

Microcrystallization indices of the postoperative wounds exudation did not showed organization of crystals, the II type

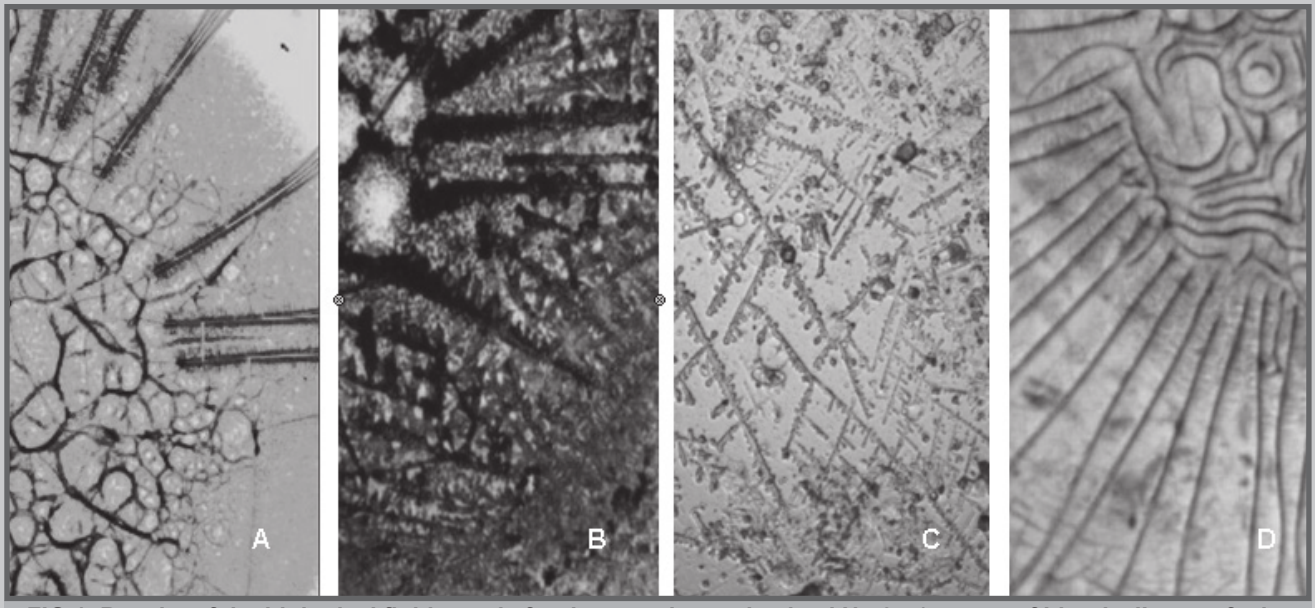

FIG.1. Results of the biological fluids study for the experimental animal No 2: a) serum of blood – II type of microcrystallization, b) oral fluid - II type of microcrystallization, c) urine - II type of microcrystallization, d) wound exudation - II type of microcrystallization.

was determined in 30% and the III type – in 70%. Picture No 1 contains results of the biological fluids examination of the experimental animal No 2 (FIG.1).

The reproducibility of the microcrystallization indices in experiment made 70%.

In the clinic, the I type of the crystals organization was found in 10% of the examined persons according to the serum of blood indices, II type – in 60%, III type – in 30%.

Results of the oral fluid and the urine were similar, I type of microcrystallization was found in 20% of examined persons, II type – in 50%, III type – in 30%. The reproducibility of this indice made 90%.

Conclusion

Taking into consideration the high percentage of correspondence of the of crystal organization in all examined biological fluids, as experimental animals as well as persons, we conclude that microcrystallization of the oral fluid is a common indices of the of the organism homeostasis which should be used for effectiveness evaluation of prophylaxis, treatment and rehabilitation procedures and prediction of a disease development. But special indices for every nosology needs to be elaborated and systematized in details as well as known methods of qualitative and quantitative appreciation of crystals need to be perfected on base of new technologies what is the subject of our further examinations.

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