

сходимость, причем скорость сходимости зависит от начальных значений коэффициентов a^0 и g^0 . На нулевом шаге управления величину g^0 можно принимать равной 1. Более точно значения g^0 подбираются на ЭВМ с использованием математических моделей процессов. Величина коэффициента на первом шаге определяется по реакции на лечебное воздействие на нулевом шаге.

Схема алгоритма адаптивного выбора тактики лечения представлена на рисунке.

Эффективность процесса лечения можно оценивать следующими критериями:

вероятностью P достижения цели лечения;
средними затратами S на лечение.

Для хронических заболеваний целесообразно осуществлять процесс лечения так, чтобы достичь

$$\min S \text{ при } P \geq P^*, \quad (11)$$

где P^* соответствует приемлемому результату лечения.

Таким образом, перед исследователем стоит задача так спроектировать алгоритмическую часть процесса принятия решений при выборе тактики лечения, чтобы обеспечить выполнение условия (11).

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THE ALGORITHMIZATION OF THE PROCESS OF CORRECTION OF THE CLIMACTERICAL SYNDROME ON THE BASIS OF THE LOGICAL MODEL USING THE ADAPTIVE ALGORITHM

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Abstract:

In this article it is given the possibility of solving problem of projecting the algorithmical path of the process of problem solution choosing the way of treating of the climacterical syndrome of women having surgical menopause, based on the principal of using of adaptive algorithm.

Key words:

Replacement hormonal therapy, climacterical syndrome, logical model, adaptive algorithm, formalization of doctor's judgement

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A.K.Martusevich, N.A.Kvitsinskaya, A.V.Bochkareva, N.V.Norenkova SPECTROMETRIC AND MORPHOMETRIC ANALYSIS OF THE DEHYDRATED BIOLOGICAL FLUIDS CRYSTALS AT THERMO-INHALATION TRAUMA

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Abstract:

Character of free and 0,9% sodium chloride solution initiated crystals yielding in saliva and blood serum of the 14 thermo-inhalation traumatized patients was studied. Spectrometric characteristics of the biofluids newgenied crystals at the 300-400 nm wave-lengths were estimated. We disposed the teziocrystalloscopic «pattern» of human biosubstratum for the studied pathological state.

Key words :

crystallization, thermo-inhalation trauma, spectrometry

Today crystalloscopic analysis of the dehydrated biological fluids is wide spread [1-5]. It is known that informativity of the crystalloscopic picture is determined by changes in biological substratum chemical composition and its physical properties, which are associated with patient's functional status. The advantages of this research methods group underline the importance of crystalloscopy application. At the same time the majority of approaches described in literature base on comparison of the dehydrated biological fluids samples by qualitative attributes and on attempts of specific crystalloscopic «markers» separation of different pathological states. That is why the significant question of modern biocrystallography is the highest possible objectivity of findings [2, 5]. It should be mentioned that the most authors do not describe or analyse the process and results of yielding of crystals, except visual description [1, 3]. There is almost no information about biological fluids morphology at burn disease, and first of all at thermo-inhalation effect [4]. That is

why our research aim was data comparison of the saliva facia criterial visual morphometry and blood serum of the patients with thermo-inhalation trauma, and biosubstratum neogenic crystals spectrometric analysis.

Materials and methods

We studied character of free and 0,9 % natrium chloride solution initiated crystals yielding in saliva and blood serum of the 14 thermo-inhalation traumatized patients. The dehydrated biological fluids micropreparations were made by classic crystalloscopy and comparative tezigraphy methods [2]. Estimation of the crystalloscopic and tezigraphic analysis results was made by the original algorithm [2].

Situated on the object-plate samples of the dehydrated biological fluids were examined spectrometrically by the PowerWave XS device (USA), special attention was paid to the waves with the 300, 350 and 400 nm length absorption rate.

Statistic processing of the data was accomplished by Microsoft Excel 2003 spreadsheets and program systems Primer of biostatistics 4.03 и SPSS 11.0.

Results and discussion

Based on the morphometric analysis of the saliva and blood serum crystalloscopic and tezigraphic facias of the

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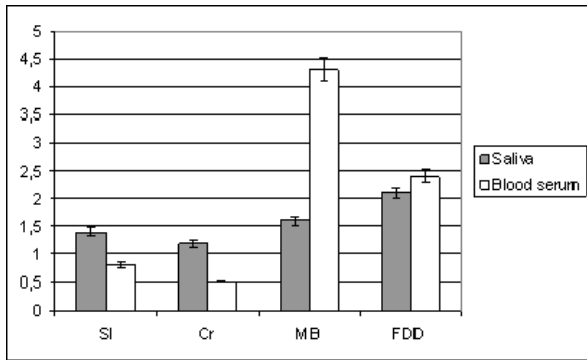


Fig. 1. Results of the saliva and blood serum facias crystalloscopic morphometry

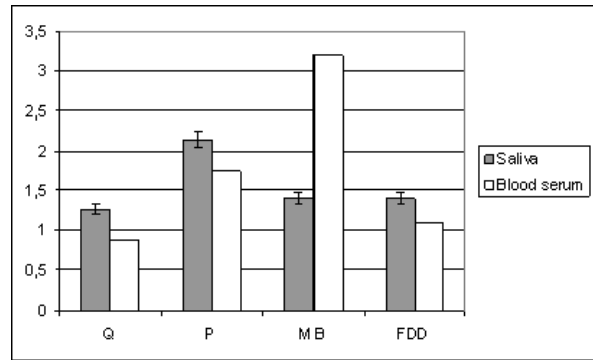


Fig. 2. Results of the saliva and blood serum facias teziographic morphometry (basic substance - 0,9 % sodium chloride solution)

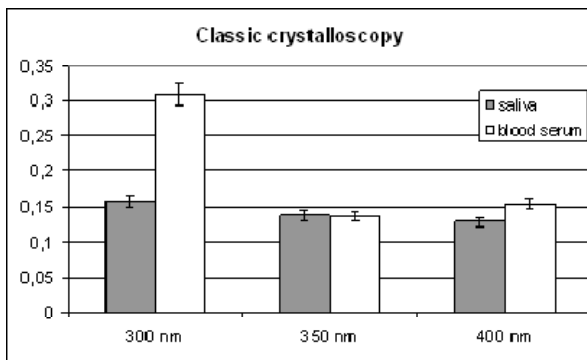


Fig. 3. Results of the saliva and blood serum facias crystalloscopic spectrometry

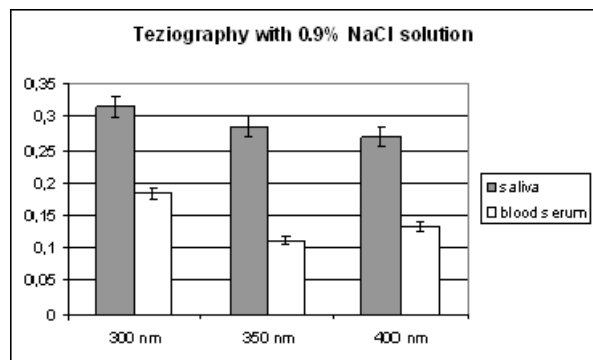


Fig. 4. Results of the saliva and blood serum facias teziographic spectrometry (basic substance - 0,9 % sodium chloride solution)

thermo-inhalation traumatized patients, we established that free (fig. 1) and initiated (fig. 2) crystallogenesis of such patients had a specific character. It should be mentioned that thermo-inhalation trauma features became apparent in micropreparations, when the characteristics of the biosubstratum samples were preserved.

Analysis of the facias spectrometric characteristics revealed some peculiarities of the biofluids crystals absorption rate at the above-mentioned wave-lengths (fig. 3, 4). It is interesting that absorption rate differentiation was noted only at 300 nm wave-length (fig. 3) in the samples made by classic crystalloscopy methods, whereas teziographic facias were differ in spectrometric characteristics at all of the studied wave-lengths (fig. 4).

Revealing of the high and medium correlated connections ($p < 0,05$) between crystals visual morphometry characteristics and their spectrometric parameters in the crystalloscopic test proved additionally biofluids composition changes at thermo-inhalation effect.

Conclusion

Considerable shifts in saliva and blood serum crystal-

logenic and initiating properties were revealed at thermo-inhalation trauma and visualized morphometrically and spectrometrically.

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СПЕКТРОМЕТРИЧЕСКИЙ И МОРФОМЕТРИЧЕСКИЙ АНАЛИЗ КРИСТАЛЛОВ ВЫСУШЕННЫХ
БИОЛОГИЧЕСКИХ ЖИДКОСТЕЙ ПРИ ТЕРМОИНГАЛЯЦИОННОЙ ТРАВМЕ**

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Аннотация:

Произведен анализ активности и кинетических характеристик лактатдегидрогеназы печени крыс линии Вистар до и по окончании дозированной термомодификации (15 мин.; 60°C). Установлено, что выполненная термомодификация фермента приводит к активации прямой и ингибированию обратной лактатдегидрогеназной реакции, что подтверждается как по динамике уровня активности энзима, так и по кинетическим показателям.

Ключевые слова:

лактатдегидрогеназа, термическое воздействие, спектрометрия