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Rezumat

Arteriolopatia uremică calcificantă (AUC), sau calcifilaxia, reprezintă o formă rară de leziune ce afectează vasele de calibru mic, caracterizată prin depunere de cristale de fosfaţi de calciu şi microtromboze în lumen cu dezvoltarea necrozei pielii şi a ţesutului subcutanat. Având o incidenţă de 1-4% şi o frecvenţă de 80% - 90%. În lucrare au fost descrise manifestările clinice a arteriolopatiei uremice calcificante la pacientul dializat după 1 an de tratament.

Summary

Calcific uremic arteriolopathy (CUA) is a rare disease, typically affecting patients with end-stage renal disease. It is characterized by vascular calcification, endothelial fibrosis and end-organ ischemia. The incidence of CUA is 1-4%, mortality rate is high (80-90%) with infection and sepsis being the most common causes of death. Although soft tissue calcification is a known complication in patients with advanced renal disease. We report the case of a 54-year-old femail patient with end-stage renal disease secondary to pielonephrytis developed CUA after 1 year on haemodialysis.

Резюме

Кальцифицирующая артериолопатия , или кальцифилаксия, является редким поражением сосудов малого калибра, характеризующимся отложением кристаллов кальция фосфатов просветесосуда эндотелиальным фиброзом. Развитием некроза кожи и подкожной клетчатки. Смертность вследствие данного осложнения достигает 1-4%, при частоте в 80% - 90%. В статье описаны клинические проявления кальцифицирующей уремической артериолопатии пациентов находящихся на гемодиализе через 1 год после лечения.

PARTICULARITIES OF THE PROCALCITONIN INDEX IN THE BLOOD OF THE INJUREDS WITH MULTIPLE TRAUMA OF HIGH SEVERITY WITH THE PREVALENCE OF THE INJURIES OF THE LOCOMOTOR APPARATUS AND OPEN FRACTURES OF LONG TUBULAR BONES

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Introduction

Inflammatory and septic complications prophylaxis problem [2], to improve treatment outcomes of the worst polytraumatised patients, with

open fractures of long tubular bones are on a plan with introduction in practice in Moldova, of the concept of «Damage control surgery" (a strategy proposed in 1990 by the Polytrauma School from Hanover), which requires an improvement of the conditions in the surgeries for emergency interventions and supplying with contemporary devices. The aim of the survey is to study the peculiarities of the changes in blood, of the procalcitonin index, at the severely polytraumatised injured, with high prevalence of the injuries of the locomotor apparatus.

Materials and methods. On the base of the Department of Intensive Therapy and Reanimation, Traumatology and Orthopedics of NSPCEM was performed a research in dynamic of the traumatic disease, procalcitonin index values (figure 1) in the blood of severely polytraumatised injured with the prevalence of the injuries of the locomotor apparatus, with open fractures of long tubular bones. In forming the group of patients, was taken under consideration the principle based on ISS score (injury severity score). Were selected 20 patients with a high severity (ISS score - 18-40) of the polytraumatism. The study of the system of the blood hemostasis was performed after 24 hours (period of relative stabilization of vital functions) [8], at the 3rd and 6th day after the injury, which coincided with the beginning and the end of the maximum possible development of the complications [8]. The blood study was performed at the patients with multiple trauma, which were not associated with severe brain trauma and the trauma of the internal organs, which were not accompanied by infectious diseases, whose expression may have influenced the results of laboratory tests. Hospitalized in shock condition I degree were 5 (25%), II degree-8 (40%), III degree-3 (15%). Mean age: 38 years (18-70 years). Female-25%. Male-75%. Road accidents-50%. Catatraumatisms -10%. The average number of fractures to an accident - 2.52. Open fractures of long tubular bones in medium to an accident - 1.4.

Figure 1. *Test B·R·A·H·M·S PCT-Q.*

Results. The stabilization measures of the patients in condition of the Department of Intensive Therapy and Reanimation were performed according to modern requirements. For prevention of the complications were used at least two antibiotics with a wide spectrum of action, in an adjusted amount to the body weight, on a ordinary period of minimum 7 days; in all the cases the prophylaxis continued throughout the period of the risk. Preventive, at all injured was collected the biological material (the wound content in the area of the open fracture) for bacteriological examination and antibioticogram. Because of the potential risk of the septic process developing, during the treatment was performed a regular monitoring of the blood levels of the procalcitonin. In the study were established some differences.

At the group of patients with a high severity of the polytraumatism without direct danger to life (ISS score -16-24 points), over the course of the period of the research, wasn't established a procalcitonin increase in the blood. From 2nd to 8th day of the traumatic disease, the values were less than 0.5 ng / ml. In dynamic, at no patient from this group, has not developed septic complications.

A number of features have been detected in the group of patients with high-severity life-threatening multiple trauma (ISS score - 25-40 points). Compared with the previous group of patients, at five injured (50% of the group in question) was observed an increase of procalcitonin. Two women, aged 60 and 65, during the relative stabilization period of the vital functions, had the indicator above 0.5 ng / ml, with normalization in the period of the maximum potential development of complications [8]. Inflammatory complications at these patients in dynamic did not occur. At another two patients of working age, over 24 hours after the multiple trauma, received as a result of high energy impact factors (rail and road accident), the procalcitonin level in blood was $\geq$ 2 ng / ml, at the beginning of the relative stabilization period of the vital functions. Taking under consideration the character of the open fractures (IO3 41C2 and IO3 41B3 after AO) with unsnatching and massive infection of the muscle, at the one of the injured, in an emergent way was performed the amputation of both legs in the third average level of the femur [6].

At another patient, to whom were not performed the prophylactic measures with two antibiotics with wide specter of action, the period of maximum development of the potential complications was aggravated by a massive phlegmon of the superior traumatized limb. As a consequence, a surgery was performed, with a deep open area of the inflammatory process, then - specific antibiotic therapy according to the antibioticogram and cropping of the inflammatory process. The fifth patient was hospitalized after a car accident with diagnosis of: open comminuted femoral shaft fracture with the lesion of the femoral artery

and vein and open fracture of the shoulder. Urgently was performed the femoral osteosynthesis with rod type external fixation devices, suturing femoral artery and vein, proximal shoulder osteosynthesis with pins, antibacterial drainage. Over 48 hours, on the background of insufficient blood circulation of the inferior limb with development of muscle necrosis, was performed the amputation in the third proximal level of the femur. During the first four days procalcitonin blood index was below 0.5 ng / ml. The increase of the procalcitonin level ≥ 2 ng / ml was observed only to the 6th day of the period of maximum development of the potential on the background of the inflammatory process development, in the region of the femoral stump.

Discussion. In the group of patients with high severity politraumatism without direct danger to life, on the background of the complication prophylaxis with wide spectrum of antibiotics, throughout the research period was not observed the increase of the procalcitonin in the blood. At no injured from this group, septic complications in dynamic, didn't developed. In comparison with the previous group of patients, 50% of the group with high severity of multiple life-threatening traumas, was observed an increase of the procalcitonin. The increase of procalcitonin level ≥ 2 ng / ml was accompanied by the development of the septic process in a case and in 2 cases the avution with necrosis of muscular mass, of the big segments of the inferior limbs.

In two cases, females, age > 60 years, throughout the period of relative stabilization of the vital functions was determined the procalcitonin level greater than 0.5 ng / ml, without further development of the septic complications.

However, basing on this study, with relatively small number of patients with multiple trauma, which were not associated with severe brain trauma and the trauma of the internal organs, it can be argumentated the necessity of a further multi aspectual study.

Conclusion. The results revealed some aspects of specific changes in blood levels of the procalcitonin at the patients with multiple trauma with open fractures of long tubular bones. The clear increase (≥ 2 ng / ml.) of the procalcitonin index was observed only in case of for massive devitalization of muscle tissue and development of active inflammatory process in the group with high severity life-threatening politraumatisms.

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Rezumat

Scopul lucrării constă în cercetarea în dinamică a valorilor indicilor procalcitoninei în sângele accidentaţilor cu politraumatisme de severitate înaltă, cu preponderenţa leziunilor aparatului locomotor şi fracturi deschise ale oaselor tubulare lungi. Luând în consideraţie numărul mic de bolnavi, la care traumatismul aparatului locomotor nu este asociat cu traumatizarea gravă a encefalului şi organelor interne, se poate argumenta necesitatea studiului multiaspectual ulterior.

Summary

The aim of the article is to research in dynamic the values of the procalcitonin index in blood of the injured with multiple trauma of high severity with the prevalence of the injuries of the locomotor apparatus and open fractures of long tubular bones. Taking under consideration, the small number of patients where the traumatism of the locomotor apparatus it's not associated with severe brain trauma and of the internal organs, it may be shown the need of the further study.

Резюме

Целью работы являлось изучение изменения уровня прокальцетонина крови пострадавших с тяжелой политравмой с преимущественным повреждением опорно-двигательного аппарата и открытыми переломами длинных трубчатых костей. Беря во внимание малое число клинических наблюдений, при которых тяжелая травма опорно-двигательного аппарата не сочетается с серьезными повреждениями внутренних органов и центральной нервной системы, можно утверждать о целесообразности дальнейших исследований в данной области.