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CHANGES IN CLINICAL INDICATORS IN THE TREATMENT OF PATIENTS WITH PHLEGMONS OF THE MAXILLO-FACIAL LOCALIZATION IN CASE OF THE USE OF CRYOCONSERVATED PLACENTA EXTRACT

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The aim of our study was to establish how to use a standardized protocol for medical care for odontogenic phlegmons of maxillofacial localization, taking into account the biological rhythm of patients.

Objects and methods. A total of 30 patients with odontogenic phlegmons of maxillofacial localization (2–3 cell spaces), aged 35 to 60 years, without systemic chronic diseases, regardless of gender, who underwent surgery in the form of opening and drainage of phlegmon with intravenous introduction of cryopreserved placenta.

Results. Analyzing the dynamics of changes in the P-1.1 indicator, it should be emphasized that this indicator reached its maximum values for 1 day after surgery, which is probably due to the body's response to iatrogenic trauma on the background of the inflammatory process. Analyzing the decrease of this indicator during the 3rd and 5th days, it should be noted that its significant value is observed in the period between the 3rd and 5th days closer to the 5th, on average by 1.78 ± 0.24. Analysis of the dynamics of the indicator P-1.2 gives grounds to show its uniform decrease during 1, 3 and 5 days after the operating period with normalization of the indicator for 7 days. The change in the dynamics of the P-1.3 indicator by its significant decrease on the 3rd day in 28% of cases and on the 5th day in 72% of cases with normalization of quantitative data on the 7th day is noteworthy. In the study of masticatory disorders (indicator P-4) should be noted the maximum value of this indicator on the 1st day, which is associated with known complications on the background of purulent inflammatory process and the presence of additional inflammatory process. A significant decrease in this indicator by 0.31 ± 0.09 points on the 5th day in 62% of cases with partial normalization on the 7th day in 62.3% and full normalization in 37.7% of cases is noteworthy. A similar picture was observed in the study of the dynamics of changes in P-1.5, but in

contrast to the previous indicator, normalization on day 7 occurred in 82.9% of cases.

In the study of indicators showing the dynamics of local changes deserves special attention indicator P-2.1, which on the 1st day after the operating period reached maximum values with a gradual decrease throughout the postoperative period, but the largest difference in its reduction by an average of 0.23 ± 00.9 scores were recorded on the 5th day in 56.9% of cases in patients with morning chronotype, operated on in the first half of the day.

Conclusion. Based on the results of the study, we can say that the use of cryoextract of the placenta not only improves reparative function, but also reduces the recurrence rate in the postoperative phase and reduces the length of stay in medical institutions.

Keywords: phlegmons; treatment; chronotype; biological rhythm.

ИЗМЕНЕНИЯ КЛИНИЧЕСКИХ ПОКАЗАТЕЛЕЙ ПРИ ЛЕЧЕНИИ ПАЦИЕНТОВ С ФЛЕГМОНАМИ ЧЕЛЮСТНО-ЛИЦЕВОЙ ЛОКАЛИЗАЦИИ С ПРИМЕНЕНИЕМ КРИОКОНСЕРВИРОВАННОЙ ПЛАЦЕНТЫ УЧИТЫВАЯ ЦИРКАДНЫЕ РИТМЫ

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Цель исследования – определить, как использовать стандартизированный протокол оказания медицинской помощи при одонтогенных флегмонах челюстно-лицевой локализации с учетом биологического ритма пациентов.

Объекты и методы. Обследовано 30 лиц с флегмонами челюстно-лицевой локализации (2–3 клеточных пространства) 35–60 лет, без системных хронических заболеваний, независимо от пола, которым проведена первичная хирургическая обработка инфекционно-воспалительного очага и дренирование заинтересованных клетчаточных пространств.

Результаты. Для клинической характеристики процесса заживления гнойных ран использовали предложенные таблицы стандартизации количественных значений показателей, определяющих динамику

изменений общего состояния (П-1), динамику местных изменений у пациентов с флегмонами челюстно-лицевой локализации (П-2) и динамику изменений гнойной раны (показатель П-3). Анализируя динамику изменения показателя Р-1.1, следует подчеркнуть, что этот показатель достигал максимальных значений на 1 сутки после операции, что, вероятно, связано с реакцией организма на ятрогенную травму на фоне воспалительного процесса. Анализируя снижение этого показателя в течение 3 и 5 суток, следует отметить, что достоверное его изменение наблюдается в период между 3 и 5 сутками ближе к 5, в среднем на 1,78±0,24. Анализ динамики показателя Р-1,2 указывает на его равномерное снижение в течение 1, 3 и 5 суток, с нормализацией на 7 сутки. Обращает на себя внимание изменение динамики показателя Р-1,3 – достоверное его снижение на 3 сутки – 28% и на 5 сутки – 72% с нормализацией количественных данных на 7 сутки. При исследовании жевательных нарушений (показатель Р-4) следует отметить максимальное значение этого показателя в 1 сутки, что связано с известными осложнениями на фоне инфекционно-воспалительного процесса. Обращает на себя внимание достоверное снижение этого показателя на 0,31±0,09 балла на 5 сутки – 62% с частичной нормализацией на 7 сутки – 62,3% и полной нормализацией – 37,7%. Аналогичная картина наблюдалась и при исследовании динамики Р-1,5, но в отличие от предыдущего показателя нормализация на 7 сутки происходила у 82,9%.

При анализе показателей, отражающих динамику местных изменений, особого внимания заслуживает Р-2.1, который в 1 сутки после операции достигал максимальных значений с постепенным снижением на протяжении всего послеоперационного периода, но наибольшая разница в его снижении в среднем 0,23±0,9 балла зарегистрированы на 5 сутки – 56,9% у пациентов с утренним хронотипом, оперированных в первой половине дня.

Заключение. По данным исследования установлено, что внутривенное введение криоконсервированной плаценты оказывает влияние на течение репаративных процессов у пациентов с инфекционно-воспалительными процессами челюстно-лицевой локализации в зависимости от периода оперативного вмешательства.

Ключевые слова: флегмоны; лечение; хронотип; биологический ритм.

Introduction. Today, information about circadian rhythms is widespread. These rhythms are generated by clocks, which are endogenous in nature

and fluctuate even in the absence of environmental signals. Circadian years include a wide range of biological processes, including neuronal, endocrine, metabolic, and behavioral functions. One of the key factors influencing behavioral patterns is the chronotype, which is defined as a circadian typology of people, and is a behavioral manifestation of people's internal clock systems that can be galvanized using several methodologies that ratify people [2].

The chronotype changes with age, creating a mismatch between the late and early circadian clocks. In general, evening (late) chronotypes are characterized by a greater impact on the body, which determines the degree of importance of the clinical condition of patients with various pathologies. In addition, the time of day plays an important role, as the effect of chronotyping on the characteristics of the clinical condition of patients is strongest in the morning and disappears in the afternoon [3]. Some authors argue that clinical data studied at different times of the day can affect not only circadian rhythms, but in general can impair cognition, emotional functioning and decision-making, as well as affect the reparative functions of the body.

Inflammatory processes for a long time remain an urgent medical and social problem, due to untimely treatment of dental care and, accordingly, the constant increase in the number of patients with this pathology. Adverse environmental factors, unbalanced diet, humanitarian and man-made factors also contribute to the high prevalence of phlegmon of maxillofacial localization [1].

A significant number of scientific works of both domestic and foreign scientists are devoted to the treatment of this pathology [4]. For a long time, surgery and drug therapy are performed according to standard protocols. There is a constant search for tools that would help optimize the course of reparative processes in this pathology. One such factor, in our opinion, is the cryoextract of the placenta, which plays an important role in enhancing the release or formation of inflammatory mediators.

The aim of our study was to establish how to use a standardized protocol for the provision of medical care for phlegmons of the maxillofacial location, taking into account the biological rhythm of patients.

Objects and methods. The research was conducted on the basis of the Department of Maxillofacial Surgery on the basis of KP Poltava Regional Clinical Hospital. M. V. Sklifosovsky. In total, the study involved 30 patients with phlegmons of maxillofacial localization (2–3 cell spaces), aged 35 to 60 years, without systemic chronic diseases, regardless of sex, who underwent surgery in the form of opening and drainage of phlegmon with intravenous administration cryopreserved placenta.

After conducting research to determine the polymorphism of genes that affect human circadian rhythm and biochemical studies to create an evidence base for the effectiveness of treatment at the next stage of the study we studied the dynamics of changes in clinical and cytological parameters to characterize the reparative processes of purulent wounds.

To clinical characterize the course of purulent wound healing, we used the proposed standardization tables of quantitative values of indicators that determine the dynamics of changes in general condition (P-1), the dynamics of local changes in patients with phlegmons of maxillofacial (P-2) and the dynamics of changes in a purulent wound (P-3).

Results. Analyzing the dynamics of changes in P-1.1, it should be emphasized that this indicator reached its maximum values for 1 day after surgery, which is probably due to the body's response to iatrogenic trauma on the background of the inflammatory process. Analyzing the decrease in this indicator during the 3rd and 5th days, it should be noted that its significant value is observed in the period between the 3rd and 5th days closer to the 5th, on average by 1.78±0.24. It is noteworthy that the higher dynamics of changes in this indicator was recorded in patients with evening chronotype who underwent surgery in the morning (74.2%), and the best dynamics was recorded in patients with morning chronotype who underwent surgery in the first half of the day (82.3%). Analysis of the dynamics of the indicator P-1.2 gives grounds to show its uniform decrease during 1, 3 and 5 days after the operating period with the normalization of the indicator for 7 days.

Noteworthy is the change in the dynamics of P-1.3 by a significant decrease on the 3rd day in 28.0% and on the 5th day in 72.0% with the normalization of quantitative data on the 7th day. In the study of masticatory disorders (P-4) should be noted the maximum value of this indicator on the 1st day, which is associated with known complications on the background of purulent inflammatory process and the presence of additional inflammatory process. A significant decrease in this indicator by 0.31±0.09 points on the 5th day in 62.0% with partial normalization on the 7th day in 62.3% and full normalization in 37.7% is noteworthy. A similar picture was observed in the study of the dynamics of changes in P-1.5, but in contrast to the previous indicator, normalization on day 7 occurred in 82.9%. In the study of indicators showing the dynamics of local changes deserves special attention indicator P-2.1, which on the 1st day after the operative period reached maximum values with a gradual decrease throughout the postoperative period, but the biggest difference in its reduction by an average of 0.23±00.9 scores were recorded on the 5th day in 56.9% in patients with morning chronotype

operated on in the first half of the day. In contrast to the previous indicator, the P-2.2 indicator reached the greatest limits of decrease on the 3rd day of the postoperative period in 42.6%, and reached the optimal values in 72.8%. This is probably due to the fact that not all patients received the full amount of mechanotherapy recommended by patients. The dynamics of changes in the P-2.3 indicator was similar to the P-2.1 indicator with the only difference, the largest difference in its value in 67.8%. By analogy with P-2.2, P2.4 had a gradual numerical decrease with full normalization on the 7th day in 88.2% in patients with evening chronotype operated in the second half of the day and 89.6% in patients with morning chronotype.

Analyzing the dynamics of P-3.2 should be noted its linear gradual decrease on days 3 and 5 with a significant decrease of 0.41±0.19 points on the 7th day after surgery in patients with morning, and 0.42±0.21 points in patients with evening chronotype.

Conclusions. According to the study, it was found that intravenous cryopreserved placenta have an impact on the course of reparative processes in patients with purulent-inflammatory diseases of the maxillofacial localization, depending on the time of surgery. The most effective results of treatment were observed in patients of the morning chronotype, who underwent surgery in the morning on the background of intravenous cryoextract of the placenta. At the same time, probable clinical changes were recorded on the 5th and 7th day in their absence on the 1st and 3rd day. Thus, the influence of the morning chronotype of circadian rhythm affects the course of reparative processes and is manifested in the later stages of reparative regeneration, which leads to a reduction in bed days in the department.

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