



**JANUARY-FEBRUARY**  
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**SCIENTIFIC IDEAS OF YOUNG**  
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**SCIENTIFIC IDEAS OF YOUNG  
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**НАУЧНЫЕ ИДЕИ МОЛОДЫХ  
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## LITERATURE SCIENCES

### EXPRESSION OF NATIONAL AND CULTURAL LINGUISTIC UNITS IN CHOLPON'S WORK "NIGHT AND DAY"

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**Annotation:** The works of Abdulhamid Sulaymon oglu Cholpon, one of the great masters of Uzbek literature, are distinguished by a deep national spirit, sincerity and high artistic level. Writer colonial nation eternal love, hatred, praising efforts in the ideas of freedom works deep in the heart of the people. His "Night and Day" is the flower of the author's creativity - the pearl of our literature.

**Keywords:** Cholpon, Night and Day, literature, work, publishing, culture.

Roman's first book – "Night" in 1936 by the State Publishing House published. Prior to that, some fragments of the work in 1935, published in the journals "Soviet literature" and "Gulistan". "Day" is called «the next part of the novel was completed and published about the start of things does not already have a document certifying them. He took his arrest; he was taken with the "unfinished manuscript of the novel". The fate of this manuscript is unknown. But this may be "Day", said expectations. World War I novel during the ongoing life of the colony of Russia, the Turkistan image. The events of the novel take place in and around the city of Andijan. "Night and Day" and the direction of the subject, according to the author's approach, we can say, Abdulla Kadiri's "Past Days" partner this year. In the play at the beginning of the twentieth century the life of Turkestan, the recession and the imprisonment will be dormant in all of the country waking up to a dream» [1]. Professor D. Quronov about the impact an important factor in the creation of the novel, explains: "The idea is to highlight the theme of «Night» and «Day» Roman a comparative look at the Memorial. Both novels are satisfied with the status of certain levels of society, «created as a result of the» or «rebellion» against him. For example, the socialist ideals sincerely believe in the spirit of Oybek 30 years of hard reality: the ideals of the conflict and confusion in the minds of writers (of doubt) that the study of art in the past to solve them ... tell everyone who took two impetuses to the creation of novel. The internal life of the community need to study the large-scale art world can meet through the concept of the period setting. Based on the same reasoning can once again be noted that, 30 years from Cholpon occurred Psychologically, it was possible to meet domestic needs only through the genre of the novel»[2]. Roman's first string «Porter,» begins with the words. Then a beautiful view of the first spring days is described. Author of this image with the colonial Turkestan Liberation approach but they also point to themselves: «Every year, in spring volunteers train warm blood ran out of nature ... Tolladay ko'mko'k sochpopuklari girls small cut kokillariday meant to mirth. Muddy the waters flowing under the ice sidekick smiled, their faces weary themselves as the slave who was drafted in to replace the conventional freedom, imminent, before the tag»[3, 4]. The chances of one of the heroes of the play (Zebiniso) in winter, spring from the heart fouling compressed into a warm pool with free lunch ... some max- hill to enjoy himself and began to indulge his wife Salto the plunge with his father Razzaq Sufi perseverance describes the layout of the village. Spring liar about the freedom associated with the desire to visit Sufi Razzaq, his chances of arrest, the more venom out of prison - the house of the commander felt that the writer of this paragraph Tsarist rule in Russia after the Bolshevik repression in Turkestan rule indicates an impression. Akbarali captain, the fourth wife of the late delivery, the conflict between the kundoshlar and as a result he was innocent, guilty scandals novel become a realistic view of it. The wife of the commander felt Poshshoxon poison killed by the Tsarist authorities provide this crime was politically motivated. If you do not find the offender earnestly hard to be late back on them. With the start of the investigation that will be displayed: «At the same reasons they conquered the country, and innovation among those «wild» very good and vigilant policy, that

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such advice and business people, loyal to the throne so hard and they heard Administrator wanted to show to senior officials. All these years of his barely-barely increased alert the people of the state can be easily produced. Forces will confine policy, land policy, and he established a family 's reputation remains the same? In particular, the local people in the middle? What does the disrepute of politics mean? Isn't the office method disrespectful? India and adjacent to the gates of a colonial policy must be to ensure a complete honor. Otherwise - the result is bad! It's scary !!!" [3]. On the third captain killed felt Military Court of the visiting delegation will arrive in the country. He was visiting the board questioned arrival. Translator's to speak with a knife, «according to court Mundo emergency elsewhere in the war zone, does not make sense.» Zakunchi lawyers and late Obrezqori criminals themselves, to resolve the fate of an innocent state agencies responsible. It is one of the state a lot of money in the treasury coffers, the other being «printed» should be stripped. Protocol emptiness and the indictment was written in haste. Through this, the writer, the colonial relationship inattentive the fate of the people in the locality. Statements in this situation took ironically reflects: « Man should be written in the protocol: a very nice letter. Nowhere in the paper like a train going to the ripples were grazing in a flat. See the letters "d" and "b" above everyone else! You will be amazed! Where «b» is encountered, the stern is curved to the right. Both high above the stern, both stern lies in the round in which the snake -frost! Not a protocol, watch out! Watch!" [3]. This is written in the Cyrillic script writer Protocol into force of the life chances of toxic property. In the end, his chances will be found guilty and sentenced to seven years in exile to Siberia. In short, Cholpon 's novel «Night and Day» is also important in Uzbek literature as a realistic work exposing the intricacies of colonial policy.

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## MATHEMATICS SCIENCES

### ВЕРОЯТНОСТНОЕ ОПИСАНИЕ СЛУЧАЙНЫХ ВЕЛИЧИНИ ИХ ОЦЕНКА

Матякубова П.М., Ш.А.Кодирова, Х.Ш.Жабборов

В статье рассматривается вероятностное описание случайных величин. Полным описанием случайной величины, а следовательно, и погрешности, является её закон распределения. Описание случайных погрешностей возможно на основе теории случайных процессов и математической статистики. Методы теории вероятностей и математической статистики позволяют установить вероятностные закономерности появления случайных погрешностей и дать количественные оценки случайной погрешности. Для оценки свойства законов распределения случайной величины в статье исследованы числовые характеристики, называемые моментами (начальными и центральными).

**Ключевые слова:** дискретные случайные величины, непрерывные случайные величины, весовой множитель, законы распределения, ряд распределения, условие нормировки, математическое ожидание, дисперсия, среднее квадратическое отклонение, интегральная функция распределения, дифференциальная функция распределения, плотность вероятности, числовые характеристики.

### PROBABILISTIC DESCRIPTION OF RANDOM VARIABLES THEIR ESTIMATE

Matyakubova P.M., Sh.A. Kodirova, H.Sh. Zhabborov

The article discusses the probabilistic description of random variables. A complete description of the random variable, and therefore the error, is its distribution law. A description of random errors is possible based on the theory of random processes and mathematical statistics. The methods of probability theory and mathematical statistics make it possible to establish the probabilistic patterns of the appearance of random errors and give quantitative estimates of random errors. To assess the properties of the laws of distribution of a random variable, numerical characteristics called moments (initial and central) are studied in the article.

**Keywords:** discrete random variables, continuous random variables, weighting factor, distribution laws, distribution series, normalization condition, mathematical expectation, variance, standard deviation, integral distribution function, differential distribution function, probability density, numerical characteristics.

#### Введение

При повторных измерениях одной и той же измеряемой величины легко можно убедиться, что результаты отдельных измерений отличаются друг от друга.

Это отличие объясняется действием погрешностей, являющихся случайными величинами.

Полным описанием случайной величины, а следовательно, и погрешности, является её закон распределения. Этим законом распределения и определяется характер появления различных результатов отдельных измерений в ряду наблюдений.

Случайная погрешность-составляющая погрешности результата измерения, изменяющаяся случайным образом (по знаку и по значению) в серии повторных измерений физической величины постоянного размера, проведенных с одинаковой тщательностью одинаковых условиях. В появлении таких погрешностей не наблюдается какой-либо закономерности, они проявляются при повторных наблюдениях в виде некоторого разброса полученных результатов. Случайные погрешности неустранимы и всегда присутствуют в результате измерения. Описание случайных погрешностей возможно на основе теории случайных процессов и математической статистики. Методы теории вероятностей и математической статистики позволяет установить

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вероятностные (статистические) закономерности появления случайных погрешностей и на основании этих закономерностей дать количественные оценки результата измерения и его случайной погрешности.

### Методы исследования и полученные результаты

Случайные величины, принимающие только значения, отличающиеся друг от друга и которые можно перечислить, называется прерывными или *дискретными*, случайными величинами.

Случайная погрешность возникает вследствие одновременного воздействия на результат наблюдения многих случайных возмущений, и сама является случайной величиной.

Недостаточное знание природы и происхождение случайных погрешностей ни в коем мере не ограничивает эффективность применения вероятностных методов.

Для характеристики свойств случайной величины в теории вероятности используются понятие закона распределения вероятностей случайной величины.

Величины, возможные значения которых не отделены друг от друга и непрерывно заполняют некоторый промежуток, называется *непрерывными* случайными величинами.

Для полной характеристики дискретной случайной величины необходимо и достаточно знать все возможные значения и вероятность появления каждого из этих значений.

Предположим, при измерении сопротивления с дискретностью отсчета 1 Ом получены десять значений: 26, 24, 26, 28, 23, 24, 25, 24, 26, 28 Ом. Для удобства восприятия информации, полученные значения располагаем в порядке возрастания: 23, 24, 24, 24, 25, 25, 26, 26, 26 Ом. Теперь запишем различные полученные значения  $x_k$  случайной величины вместе с числом, указывающим сколько раз получено каждое значение, как это приведено в таблице 1 (где  $k=1, 2, \dots, m$ )

Таблица 1.

Значение $x_k$ , Ом	23	24	25	26	27	28
Число реализаций $n_k$	1	3	2	3	0	1
Вероятность $P_k (F_k)$	0,1	0,3	0,2	0,3	0	0,1

Величины  $n_k$  ( $k = 1, 2, m$ ) обозначают числа, показывающие сколько раз было получено соответствующее значение.

Из полученных данных вычисляем среднее арифметическое значение для дискретной случайной величины:

$$\bar{x} = \frac{\sum_{i=1}^n x_i}{n} = \frac{23 + 24 + 24 + 24 + 25 + 25 + \dots + 28}{10} \quad (1)$$

Или в другой форме записи оно выглядит так:

$$\bar{x} = \frac{23 + 24 \cdot 3 + 25 \cdot 2 + 26 \cdot 3 + \dots + 28}{10} = \frac{\sum_{k=1}^n x_k n_k}{N}, \quad (2)$$

где  $n_k$  – показывает, сколько раз это значение измерялось.

В выражении (1) суммировались результаты всех полученных значений. Сумма (2), иногда называется *взвешенной суммой*, так как каждое значение  $x_k$  умножается на весовой множитель  $n_k$ .

Тогда

$$\sum_{k=1}^m n_k = N \quad (3)$$

Обычно, вместо использования  $n_k$  числа, показывающего, сколько раз было получено показание  $x_k$ , вводится относительные частоты  $F_k = n_k / N$ , которые при  $N$ , стремящемся к бесконечности, стремятся к вероятностям  $P_k$  появления конкретных значений дискретных случайной величины. Значения  $P_k$  и  $F_k$  приведены в третьей строке табл. 1.

Законом распределения вероятности (законом распределения) случайной величины

называется всякое соотношение, устанавливающее связь между возможными значениями случайной величины и соответствующими им вероятностями.

Простейшей формой задания распределения является таблица (таб.2.), которая часто называется рядом распределения случайных величин  $X$ .

Таблица 2.

$X$	$x_1$	$x_2$	$x_3$	$x_4$	$x_5$	$x_6$	...	$x_n$
$P$	$P_1$	$P_2$	$P_3$	$P_4$	$P_5$	$P_6$	...	$P_n$

где  $X, x_1, x_2, \dots, x_n$  – полученные значения случайной величины;  $P, P_1, P_2, \dots, P_n$  – вероятности этих величин.

Сумма вероятностей в этом случае равна единице:

$$\sum_{i=1}^n P_i = 1. \quad (4)$$

Если сумма какого-то набора чисел равна 1, то эти числа считаются нормированными. Выражение (4) называется *условием нормировки*. Ряд распределения может быть представлен в виде графика (рис.1.) для случая, когда по оси абсцисс откладывают возможные значения случайной величины, а по оси ординат – вероятности этих значений.

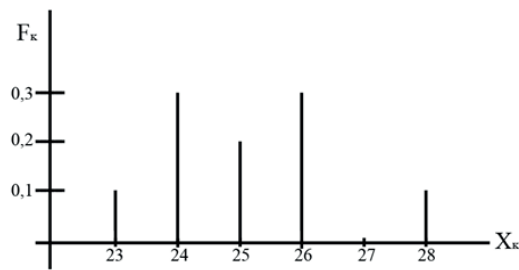


Рис.1. График распределения дискретной случайной величины.

Для описания частных свойств случайных величин используют числовые характеристики распределений. Для дискретной случайной величины наиболее употребительными являются:

*Математическое ожидание*, которое вычисляется как сумма произведений всех возможных её значений на вероятность этих значений

$$M(x) = x_1P_1 + x_2P_2 + \dots + x_nP_n = \sum_{i=1}^n x_iP_i \quad (5)$$

На практике при ограниченном числе наблюдений оценкой математического ожидания является среднее арифметическое значение, которое вычисляется согласно (2). Значения  $x_k$  получаются в результате измерительного эксперимента.

*Дисперсия*, которая является математическим ожиданием квадрата отклонения случайной величины от её математического ожидания.

$$D(x) = M[X - M(X)]^2 = \sum_{i=1}^n [x_i - M(X)]^2 P_i. \quad (6)$$

Из (6) следует, то дисперсия имеет размерность квадрата случайной величины и поэтому вводят понятие среднего квадратического отклонения (СКО). Среднее квадратическое отклонение это корень квадратный из дисперсии и СКО имеет размерность самой случайной величины:

$$\sigma_x = \sqrt{D(X)} \quad (7)$$

Дисперсия и СКО служат для оценки разброса случайной величины относительно её среднего значения.

Пример: найти математическое ожидание и дисперсию случайной величины. Используя (5) получим:

$$M(x) = 1 \cdot 1/6 + 2 \cdot 1/6 + 3 \cdot 1/6 + 4 \cdot 1/6 + 5 \cdot 1/6 + 6 \cdot 1/6 = 7/2$$

$$D(x) = (1-3,5)^2 \cdot 1/6 + (2-3,5)^2 \cdot 1/6 + (3-3,5)^2 \cdot 1/6 + (4-3,5)^2 \cdot 1/6 + (5-3,5)^2 \cdot 1/6 + (6-3,5)^2 \cdot 1/6 = 2,917$$

Так как непрерывная случайная величина имеет бесконечно множество возможных значений, её нельзя описать законом распределения, как в дискретных случайных величинах. Составить таблицу также невозможно. Для количественной характеристики распределения вероятности в этом случае пользуются не вероятностью события  $X=x$ , а вероятностью события  $X < x$ , здесь  $x$  – некоторая текущая переменная. Вероятность этого события зависит от  $x$  и является некоторой функцией от  $x$  эта функция называется функцией распределения вероятности случайной величины  $X$  и обозначается  $F(x)$ :

$$F(x) = P(X < x) \quad (8)$$

Функция  $F(x)$  называется интегральной функцией распределения или интегральным законом распределения. Эта функция распределения вероятности является универсальной характеристикой и существует как для дискретных, так и для непрерывных случайных величин.

Функция распределения обладает некоторыми общими свойствами, которых можно описать следующим образом:

Функция распределения  $F(x)$  есть функция не убывающая функция своего аргумента, то есть при  $x_2 < x_1$ ,  $F(x_2) > F(x_1)$ .

При  $F(-\infty) = 0$ , то есть на минус бесконечности функция распределения равна нулю.

При  $F(+\infty) = 1$ , то есть функция распределения равна единице.

Для непрерывной случайной величины с функцией распределения вероятности

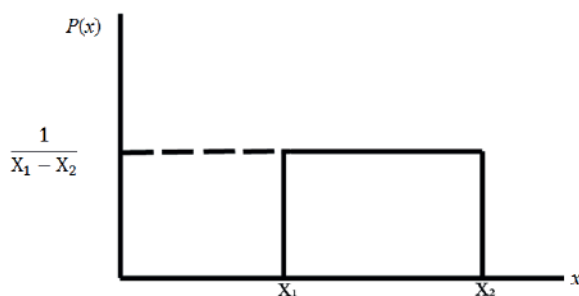
$F(x)$ , можно найти дифференциальный закон распределения вероятностей в виде выражения

$$P(x) = F'(x) \quad (9)$$

Эта функция называется дифференциальной функцией распределения или плотностью распределения вероятности. Функция всегда неотрицательна и подчинена условию нормирования в виде:

$$\int_{-\infty}^{+\infty} P(x) dx = 1$$

В метрологической практике часто используется равномерный закон, когда возможные значения непрерывной случайной величины находятся в пределах некоторого конечного интервала, причем все значения случайной величины, в пределах этого интервала, обладают одной и той же плотностью вероятности (рис.2).



**Рис.2 Равномерный закон распределения плотности вероятности.**

Равномерное распределение случайной величины аналитически записывается в виде:

$$\begin{cases} p(x) = \frac{1}{X_2 - X_1} & \text{при } X_1 < x < X_2 \\ p(x) = 0 & \text{при } x < X_1 \text{ и } x > X_2 \end{cases}$$

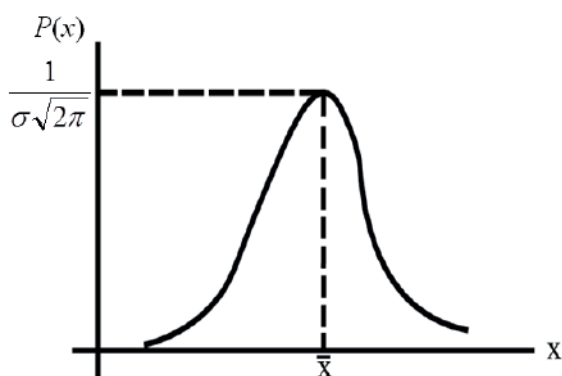
В измерительной практике используется также нормальный закон распределения случайной величины. В любом случае результат измерения при непрерывном отсчете зависит от влияния многих возмущающих фактора. Когда независимых возмущающих факторов много, но влияние каждого из них в отдельности мало и примерно одинаково, применимы две аксиомы:

1. *Аксиома симметрии*: при большом числе отсчетов случайные отклонения от среднего значения, равные по величине, но различные по знаку, встречаются одинаково часто.
2. *Аксиома монотонного убывания плотности вероятностей*: чаще всего встречаются меньшие отклонения, а большие отклонения встречаются тем реже, чем они больше.

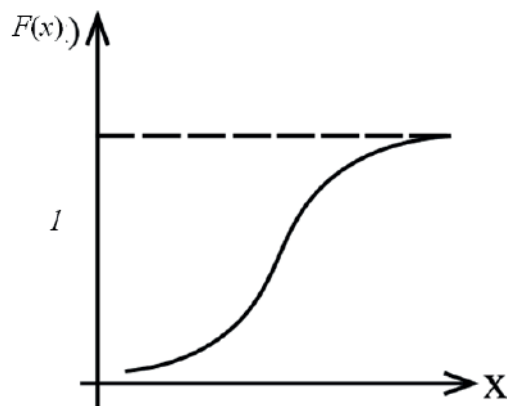
При неограниченном увеличении числа независимых влияющих факторов и при условии, если эти аксиомы соблюдаются закон распределения плотности вероятности запишется в виде:

$$P(x) = \frac{1}{\sigma\sqrt{2\pi}} e^{-\frac{(x-\bar{x})^2}{2\sigma^2}}, \quad (10)$$

Где  $\bar{x}$  – среднее значение;  $\sigma$  – среднее квадратическое отклонение. Это закон называется нормальным законом распределения случайной величины. Дифференциальная  $P(x)$  и интегральная  $F(x)$  функции распределения для нормального закона приведены на рис.3 и 4 соответственно.



**Рис.3 Дифференциальная функция распределения для нормального закона.**



**Рис.4 Интегральная функция распределения для нормального закона.**

Для описания частных свойств случайной величины используют также числовые характеристики распределения. В качестве числовых характеристик выступают моменты случайных величин *начальные* и *центральные*. Все они представляют собой некоторые средние значения, причем, если усредняются величины, отсчитываемые от начала координат, моменты называются начальными, а если от центра закона распределения – то центральными.

Начальный момент каждого порядка определяется формулой:

$$\bar{x}^k = \int_{-\infty}^{+\infty} x^k p(x) dx,$$

где  $k$  – номер момента. Важнейшим начальным моментом является первый – среднее значение.

$$\bar{x} = \int_{-\infty}^{+\infty} x p(x) dx,$$



Первый центральный момент называется математическим ожиданием и обозначается символом  $M(x)$  (как и для дискретной случайной величины).

Математическое ожидание служит для определения положения случайной величины на числовой оси – её среднего значения, определяющего положение области, в которой группируются значения случайной величины. Следует рассмотреть некоторые свойства математического ожидания:

1. Математическое ожидание неслучайного числа равно самому числу:

$$M(a)=a,$$

Где  $a=\text{const}$ .

2. Постоянный множитель можно выносить за знак математического ожидания:

$$M(ax)=aM(x).$$

3. Математическое ожидание алгебраической суммы независимых случайных величин равно алгебраической сумме их математических ожиданий:

$$M(x+y-z)=M(x)+M(y)-M(z)$$

4. Математическое ожидание произведения независимых случайных величин равно произведению их математических ожиданий:

$$M(xyz)=M(x)M(y)M(z)$$

5. Математическое ожидание отклонения случайной величины от её математического ожидания равно нулю:

$$M[x-M(x)]=0$$

Если начало координат перенесено в центр закона распределения вероятности, то такое распределение называется центрированным и общее правило образования центральных моментов записывается в следующем виде:

Из этой формулы видно, что первый центральный момент равен нулю.

$$(x-\bar{x})^k = \int_{-\infty}^{+\infty} (x-\bar{x})^k p(x) dx$$

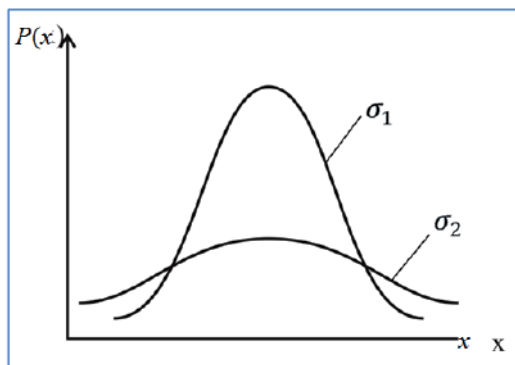
Второй центральный момент называется дисперсией  $\sigma^2$ :

$$\sigma_x^2 = (x-\bar{x})^2 = \int_{-\infty}^{+\infty} (x-\bar{x})^2 p(x) dx \quad (11)$$

Основные свойства дисперсии, обычно дисперсию обозначают символом  $D(x)$ :

1. Дисперсия неслучайного числа равна нулю:  $D(a)=0, a=\text{const}$ .
2. Постоянный множитель можно выносить за знак дисперсии и возводя его в квадрат, имеем  $D(ax)=a^2D(x)$
3. Дисперсия алгебраической суммы независимых случайных величин равна арифметической сумме их дисперсии:  $D(x+y-z)=D(x)+D(y)-D(z)$
4. Дисперсия случайной величины равна разности между математическим ожиданием её квадрата и квадратом математического ожидания:  $D(x) = M(x^2) - M^2(x)$

Следовательно, чем больше дисперсия, тем значительнее рассеяние результатов сравнения относительно среднего значения (рис.5)



**Рис.5** График плотности распределения вероятности при различных значениях дисперсии.

В метрологии в качестве меры рассеяния используют среднее квадратическое отклонение, которое по размерности совпадает с измеряемой величиной.

#### **Заключение**

Итак, можно отметить, что математическое ожидание служит для определения положения случайной величины, то есть положение области, в которой группируются значения случайной величины, а дисперсия определяет рассеяние результатов относительно среднего значения.

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## MEDICAL SCIENCES

### RESEARCH OF METHODS OF APPLICATION OF NEUROINFORMATION NETWORKS IN MEDICINE

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**Abstract:** The article presents an analysis of the use of neural network technologies for medical diagnosis of various diseases, the purpose of which is to determine which areas of diagnosis of neural network technologies are the most effective. At the same time, the structure of artificial neural networks, learning algorithms and the accuracy of the functioning of artificial neural networks were considered. Analysis of the literature showed that the most optimal model of artificial neural networks for solving tasks of medical diagnosis, multilayer perceptron.

**Keywords:** neural networks, artificial neural networks, healthcare, medicine, medical diagnostics, mathematical modeling

One of the most relevant modern directions of medicine is the development of intelligent systems for the diagnosis and prediction of diseases and their application in practice [1]. The basis of these types of systems is based on various mathematical models and algorithms. Systems based on the mathematical apparatus of artificial neural networks (SNTs) are particularly effective in solving medical diagnostic and prediction problems. CNTs are mathematical models based on the principle of organization and operation of medical neural networks, as well as their software or hardware applications. CNT consists of elements called mathematical neurons, the mathematical neuron receives information, on the basis of which it has weight coefficients, performs calculations on it and transmits it to the next system. Connected and interconnected mathematical neurons form a neural network that can solve very complex problems. Several types of multi-layered perceptron are currently the most widely used ins. In this article, we will consider the use of CNTs in various fields of medicine, with particular emphasis on their architecture, teaching algorithms, and the accuracy of their performance. TV. Chashi and co-authors considered the possibility of predicting the progression of postipox disorders of the cardiovascular system in newborns using CNT in the field of cardiology. In this study, two three-layer networks were created, at the input of which the rtimi records of heart rate variability were given in the form of a sequence of RR interval values.

Particular attention is paid to the use of CNT in the diagnosis of coronary heart disease. A.G. Sboev and co-authors [2] showed that two latent multilayered perceptrons are the most optimal topology for the diagnosis of coronary heart disease. The training was performed using genetic optimization for the number of neurons in the latent layers. The accuracy of the diagnosis of coronary atherosclerosis and coronary heart disease was 96 and 94%, respectively. shows that the neural network model is higher than the accuracy.

The model structure used in this study consists of a multilayer architecture consisting of 13 input neurons, 13 latent neurons, and 1 output neuron. H. Moghaddasi as an activation function and others selected a sigmoid function using a multilayered perceptron trained using the Broyden – Fletcher – Goldfarb – Shanno (BFGS) algorithm as a neural network model for diagnosing cardiac ischemia. The accuracy of the model was 73.39%, with a sensitivity of 93.44% and a specificity of 28.34%. To increase the effectiveness of the diagnosis of coronary heart disease, Z. Arabasadi et al. [3] proposed a hybrid method that combined a genetic algorithm and CNT. Using this methodology, the authors of this study achieved an accuracy of 93.85%, while the sensitivity of the model was 97% and the specificity was 92%.

With the development of neural network technologies, new CNT architectures and new algorithms for their training have been developed. In 2006, in-depth training technologies were introduced for the networks. This approach became widespread only after 2012. Thus, in 2017, scientists A. Caliskan and M. Yuksel published a scientific article stating that deep neural networks can be used to diagnose

coronary heart disease. In this study, the classification of diagnosed patients into two groups - “patient healthy” and “sick patient” classification was adopted. The network was trained in two phases. The age and sex of the patient, as well as laboratory blood tests and ECG readings were used as training parameters. The neural network was trained in two data sets, in the first case the network classified patients with 87.6% accuracy, and in the second case with 89.7% accuracy.

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## USE OF GIRUDOTHERAPY IN THE PREVENTION OF CHRONIC TENSION HEADACHES

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**Abstract.** Due to the fact that primary headaches in Uzbekistan are not given sufficient attention, the diagnosis of primary headaches should mainly be made as a result of clinical examination, additional examination methods (MRI, EEG, Dopplerography) episodic primary headaches take chronic forms as a result of the fact that they do not give any results in primary headaches, the diagnosis of secondary headaches is based mainly on the results of MRI, EEG, Doppler studies, which leads to the unjustified use of nootropics and neurometabolics, and these tools do not give results for primary headaches. The use of special questionnaires for the diagnosis of primary headaches allows you to make a diagnosis without unnecessary costs.

**Keywords:** hirudotherapy, neurometabolics, episodic primary, nootropics, nintocyeption, Girudine.

Based on the obtained scientific data, it is recommended to use hirudotherapy in practice for clinical doctors in the treatment of tension headaches. The results obtained allow the use of hirudotherapy in addition to pharmacological agents in the treatment of headaches. Given that patients with chronic headaches suffer from different degrees of depression, the result of the properties of antidepressants and hirudotherapy will be studied. The medicinal properties of the medical leech have been known to people for thousands of years. The description of methods of treatment of various diseases with the help of a leech can be found in medical collections of most ancient civilizations: Ancient Egypt, India, Greece. The use of leeches was described by Hippocrates (IV-V centuries BC) and Avicenna (Ibn Sina, 980-1037). (2)

In the pathogenesis of the disease lies acute or chronic psychogen stress. Dysfunction of the limbico-reticular system disrupts central antinocyeption. The main nociceptive system is the serotonergic system, the failure of which leads to the development of chronic pain syndromes and depression. (6) The use of antidepressants in chronic pain syndromes has been proven pathogenetic. In the pathogenesis of migraine, two groups of factors are involved: biochemical mechanism and systemic mechanism. On the basis of Biochemistry lies the violation of the exchange of biologically active substances (serotonin, noradrenaline, histamine, prostaglandin, kinin, R substance, etc.). (5)

Systemic ocular sympathetic innervation of the vessels of the head includes constitutional - hereditary insufficiency. This deficiency causes migraines paroxysms, calling for regional vegetative dysfunction in the head area. Through the metabolism of the above biologically active substances, vasomotor disorders appear in the vascular adrenoceptors and pain receptors and lead to extreme sensitivity of the trigemino-vascular system. Pain sensitivity in all phases of a migraine attack decreases, bradykinin, prostaglandin, histamine in the body increases. (1,4) Most often in the second phase of the menstrual cycle, migraine attacks occur as a result of the weakening of the antinocyeptive system, acute and chronic stress, exacerbation of chronic diseases. Tension headaches are divided into two: 1) episodic; 2) chronic; episodic headaches last from 30 minutes to 1-2 hours and can be observed up to 7-15 days in a month. In its chronic form, the disease attack is observed no more than 15 days a month. Episodic tour headache will be on the day of the harrowing, there will be improvement in the meantime, in chronic form the pain will not be constant and improvement in the meantime. (3)

The diagnostic criteria for the disease are: 1) bilateral diffuse; 2) monotonous pressing, pulsating pain in the brain as a shlem, Kaska - wearing; 3) at medium intensity; 4) nausea, photo- and phonophobia should not be expressed or sluggish; 5) the onset of the disease at a young age 20-30 years.

As the effectiveness of the drug increases, its complications and side effects increase. Side effects are not only a serious medical, social, but also economic problem. The cost of medication complications is \$76.6 billion a year in the US. The use of non-medicinal methods and the oppression of medicine, as well as the concomitant use of the drug, leads to a decrease in the dose of the drug therapy, as well as a decrease in side effects. (4)

The inability of nonsteroidal anti-inflammatory drugs to provide adequate results in the treatment of primary headaches requires consideration of effective therapies and emphasizes the importance of



non-drug treatments. Therefore, the improvement of algorithms for the diagnosis and treatment of primary headaches is currently a modern requirement.

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## RISK FACTORS AND PECULIARITIES OF THE CLINICAL CURRENT OF PURULENT INFLAMMATORY DISEASES OF THE UTERINE APPEARANCES IN THE AGE ASPECT

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**Abstract.** Epidemiological and clinical analysis of cases of pyoinflammatory diseases of the pelvic organs in women of reproductive age showed that in women over 30, the clinical picture is characterized by a lesser severity of pain and intoxication syndrome, which complicates the diagnosis. The main risk factors are previous sexually transmitted infections, frequent artificial abortions, early debut of sexual activity and low levels of contraception culture.

**Key words:** purulent-inflammatory diseases of the uterine appendages; risk assessment; clinical course.

The results of a number of studies indicate that the frequency of purulent-destructive forms of PID does not tend to decrease, but on the contrary, it has recently increased by 13-25% in the general population of women of childbearing age [1, 3]. So in the United States, about a million cases of PID are registered annually, this pathology is the cause of 2.5 million outpatient visits and causes up to 150,000 hospitalizations annually. According to the WHO, up to 500 million new cases of infectious diseases with sexual transmission in women of reproductive age are annually registered, every third of them may subsequently develop pelvic inflammatory disease. According to experts in developed countries, the frequency of PID among women of reproductive age is 10-20% [4, 6]. Currently, various authors name young age, promiscuous behavior, a low level of contraception culture, and living in regions with a high prevalence of sexually transmitted infections as the main risk factors for the occurrence of inflammatory diseases. The iatrogenic factor is of some importance. At the same time, when analyzing the frequency of pyoinflammatory diseases of the uterine appendages, various authors obtained rather contradictory data associated with the difficulties of diagnosis and observation in the follow-up period [2, 5]. In this regard, the problem of assessing the significance of various risk factors for the occurrence of pyoinflammatory diseases of the pelvic organs and the peculiarities of their clinical course in the age aspect does not lose its relevance.

The aim of the study is to conduct an epidemiological and clinical analysis of cases of pyoinflammatory diseases of the pelvic organs in women of reproductive age.

**Material and methods:** A retrospective study of medical documentation (case histories, morphological data and laboratory tests) of patients who were observed in the gynecological department of the Bukhara branch of the RSEMP in Bukhara in 2018-2020 was carried out. 56 cases of pyoinflammatory diseases of the pelvic organs and subject to urgent surgical treatment were identified from the total array of analyzed medical documentation. The manifestations of generalized and local postoperative complications against the background of such pathologies were subject to analysis: purulent salpingitis, pyosalpinx, purulent tubo-ovarian formations, abscesses, parametritis, appendicular infiltrate, pelvioperitonitis and peritonitis. On the first day of hospitalization, all patients underwent operations of various volumes (extirpation of the uterus with appendages, drainage of the abdominal cavity, adnexectomy, tubectomy, tubotomy). Anamnestic data, the number of complications, and features of the postoperative period were evaluated. Statistical analysis was carried out by the method of analysis of contingency tables with the determination of the relative risk according to Mantel-Hansel in the age-stratified sample. The applied software package Statistica 12.5 (StatSoft Inc., USA) was used for calculations.

**Results and discussion.** The clinical picture of the studied cases was stereotyped. The patients complained of pain in the lower abdomen, fever, general weakness, dry mouth, nausea, and every fifth patient vomited at the time of admission. Signs of peritoneal irritation were found in 94.6% of patients. The age structure was dominated by women under the age of 30 (67.8% of the total number of clinical cases studied). We explain the observed differences in clinical manifestations at the time of admission to the admission department of the clinic in patients of different ages by the peculiarities of the body's reactivity, different intensity of the inflammatory process and microbial agent, and the

age of patients.

**Conclusions.** When assessing the relative risk, it was found that the most important for the development of purulent-inflammatory diseases of the pelvic organs are previously transmitted sexually transmitted infections, frequent artificial abortions, early sexual debut and low level of contraceptive culture.

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## MANAGEMENT AND TREATMENT OF PREGNANT WOMEN WITH CHRONIC RHINOSINUSITIS

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**Abstract:** Pregnant chronic rhinosinusitis is a disease accompanied by nasal congestion and secretions, periodic sneezing without signs of inflammation, allergies or other causes. This condition can occur in any trimester of pregnancy and usually disappears within two weeks after giving birth.

**Key words:** chronic rhinosinusitis, pregnant rhinosinusitis, nasal congestion, viral infections, sleep disturbance, arterial hypertension, and fetal growth retardation.

Recent studies indicate that although the cause of allergic rhinitis AR is not completely clear, the combination of pregnant rhinosinusitis PR, especially poorly controlled with PR, can lead to pronounced nasal congestion, to insufficient oxygen supply, and, as a result, to increased fatigue, irritability, frequent acute respiratory viral infections, sleep disturbance, which certainly can affect the development of the fetus. Moreover, the presence of AR is associated with snoring in women during pregnancy, and together they can provoke the development of apnea syndrome (respiratory arrest in sleep), which leads to arterial hypertension, preeclampsia, fetal growth retardation. Therefore, the relevance of this problem is only growing.

Nasal congestion is a very common problem during pregnancy (found in about 65% of cases), which can occur due to various reasons. According to various sources, PR occurs in 9-40% of cases, and, in one of the latest observations, an increasing occurrence is observed, that is, RB is most observed in the 3rd trimester - 38.9%, including those who did not have problems in 1st and 2nd trimester.

### Causes and mechanism of occurrence

The mechanism of occurrence is not fully understood, and it is believed that PR occurs due to hormonal changes, in particular, under the influence of progesterone, estrogen, Human chorionic gonadotropin hCG and other hormones, the concentration of which gradually increases during pregnancy. Some authors believe that the onset of PR is associated with a worsening of concomitant AR. Some studies show that hormonal effects relax the smooth muscles that make up the vascular wall of the nasal mucosa, resulting in nasal congestion. Such findings are supported by other studies that show that oral contraceptives cause similar effects in the nasal cavity (but not all). Other works show that an increased body mass index, overweight, and multiple pregnancies provoke or aggravate PR.

**Progression and Potential Risks.** In the absence of adequate treatment, PR has an adverse effect on the course of pregnancy and can lead to the development of rhinosinusitis, which is especially difficult to tolerate in the 3rd trimester. On the other hand, pregnancy is a special period in a woman's life, in which a large number of drugs are prohibited, and ENT pathology, these restrictions are also not spared. Very often I hear at the reception: "Doctor, I'm pregnant and tormented with my nose all this time, but doctors tell me - there's nothing to be done, you have to endure." On the other hand, the opposite situation is often observed: "Doctor, I'm pregnant and I can't live without vasoconstrictive drops." These situations, of course, are not correct, since on the one hand there is a way out and optimal treatment, and on the other hand, constant exposure to vasoconstrictor drugs is not a way out of the situation.

### Diagnostics

At the moment, there is no specific test to confirm or exclude PR. The diagnosis is made on the basis of patient complaints and exclusions of other pathologies of the nasal cavity.

### The choice of medical tactics. Saline solutions

Before considering more serious medications, you should start with our favorite saline solutions. It should be noted that this is not about ordinary saline solutions, but hypertonic saline solutions (with a high salt content, about 19-23 g / l). Such sprays are sold in all pharmacies, but they will not be sold immediately to you (you need to ask). Several studies have noted significant effectiveness in reducing congestion when used in AR, chronic rhinosinusitis. Comparative studies also show their greater effectiveness compared to conventional isotonic solutions.

As is known from past publications, intranasal glucocorticosteroids (IGCS) are currently the most

effective in the treatment of AR. They have proven effectiveness in reducing nasal congestion, as well as itching in the nose and lacrimation, and allow for adequate control of symptoms. But, given their hormonal effect and possible detrimental effect on the fetus, there are certain risks in their use. It should also be noted that at the moment there are no studies providing reliable data confirming the danger of their use. Modern IHCS - mometasone (nasonex, desrinitis) and fluticasone (avamis, flixonase) have a very low systemic bioavailability, less than 1% and proven effectiveness thereby can be considered as an initial treatment for RB. The studies did not reveal a statistically significant relationship between the development of fetal malformations and the use of these drugs.

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## FORMATION OF AN INDIVIDUAL PREDISPOSITION TO COVID-ASSOCIATED ISCHEMIC STROKE

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**Abstract.** Various possible and non-mutually exclusive mechanisms may play a role in the development of ischemic stroke in patients with COVID-19. Long duration of mechanical ventilation (ALV) makes COVID-19 patients requiring invasive respiratory support more vulnerable to complications associated with the development of critical illness, including the risk of hypotension and inadequate cerebral perfusion; risk of relative hypertension leading to posterior reversible encephalopathy syndrome; the possibility of septic embolism in the event of a bacterial infection; the possibility of cardiomyopathy and a concomitant decrease in the left ventricular ejection fraction.

**Keywords.** COVID-19, ischemic stroke, hypotension, SARS-CoV-2, Diabetes mellitus.

In addition, severe COVID-19 has been associated with a hyperinflammatory condition (“cytokine storm”) [1]. COVID-19 increases levels of pro-inflammatory molecules, including interleukin (IL) -1 and -6 [2]. The systemic inflammatory response can also lead to rupture or erosion of atherosclerotic plaque and destabilization of previously asymptomatic cardiovascular conditions such as myocardial infarction (MI), heart failure, and myocarditis [3].

Moreover, patients with COVID-19 may develop more severe coagulopathy, defined as “coagulopathy associated with COVID-19”, which is induced by an acute systemic inflammatory response, presumably mediated by an infectious agent or its products. SARS-CoV-2 can lead to severe inflammation, including an inflammatory “cytokine storm,” which in turn leads to “COVID-19-associated coagulopathy” or thrombosis [5].

Acute disorders of cerebral circulation are the most important medical and social problem. There are more than 1 million people with ischemic stroke in Uzbekistan, and more than 80% of them have disabilities. The mortality rate of ischemic stroke, in the acute stage, is 35% [Madzhidova Ya.N., 2017; Khodzhiyeva D.T., 2019; Rakhimbaeva G.S. et al. 2020]. Cognitive impairments of varying severity are detected in 40 - 70% of patients with ischemic stroke. The prevalence of dementia in the first 3-6 months after a stroke ranges from 5 to 32%, and 12 months later - from 8 to 26% [6].

Endocrinopathies are one of the significant risk factors for cerebrovascular diseases. The number of such patients is increasing in all economically developed countries of the world. Diabetes mellitus is the most common endocrine disease associated with cerebrovascular accident. According to the results of statistical studies in recent years, more than 10% of patients with type 2 diabetes mellitus die due to cerebral circulation disorders [3]. Cognitive impairments in patients with ischemic stroke and type 2 diabetes mellitus differ in a number of features, however, studies on this problem are few and contradictory.

At the end of 2019, an outbreak of a new coronavirus infection occurred in the People’s Republic of China (PRC) with an epicenter in the city of Wuhan (Hubei province), the causative agent of which was given the temporary name 2019-nCoV. On February 11, 2020, the World Health Organization (WHO) has assigned the official name of the infection caused by the new coronavirus - COVID-19 (“Coronavirus disease 2019”). On February 11, 2020, the International Committee on Virus Taxonomy gave the official name to the infectious agent - SARS-CoV-2. The COVID19 pandemic was declared by WHO on 9 March 2020. [1,4,7]

Taking into account the development of the epidemic process in the world, the healthcare professionals were assigned tasks related to the rapid diagnosis and provision of medical care to patients. Along with the methodological recommendations aimed at the prevention, diagnosis and treatment of new coronavirus infection in the general population scale, it became necessary to focus on certain categories of patients at special risk groups.

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## APPLICATION OF AUTOPLASMA ENRICHED PLATELETS IN THE TREATMENT OF ODONTOGENIC INFECTION IN PATIENTS WITH NON-INSULIN-DEPENDENT DIABETES MELLITUS

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**Abstract:** the article is dedicated to the advanced multimodality therapy of the patients with odontogenic osteomyelitis of the jaws and its complications with local application of platelet enriched with plasma in the patients with diabetes mellitus taking into account the nature of the course of the inflammatory process. Platelet autoplasm is a highly active biological stimulator of regeneration processes owing to various growth factors contained in alpha granules of platelets, acting on all structural units of the surrounding tissue and stimulating regeneration processes. The article defines the use of platelet autoplasm and their advantage in the treatment of abscesses and phlegmon of the maxillofacial area in patients with diabetes mellitus.

**Key words:** phlegmon, osteomyelitis, autoplasm, immunity, diabetes mellitus, antibiotic, growth factor, infiltrate, glycemia, pus, infection, detoxification.

**Introduction.** The frequent development of abscesses and phlegmon in the head and neck is due to the high prevalence of chronic focal odontogenic, tonsilogenic infection, as well as infectious and inflammatory lesions of the skin and oral mucosa. The most common form of septic inflammation is odontogenic suppurative inflammatory disease. The combination of odontogenic infection with diabetes forms a vicious circle in which the infection negatively affects metabolic processes, exacerbating insulin deficiency and increasing acidosis, and metabolic and microcirculatory disorders worsen the course of reparative processes in the lesion. Due to the reduced resistance of diabetes patients to infection, wounds predominate in necrotic processes, the classic symptoms that characterize inflammation are sometimes mild, and some may be absent. Suppurative processes can acquire a dystrophic nature, which is based on tissue acidosis. Quite often, in these patients there is a reactive course of the purulent process or a sluggish, protracted course of a wound infection after the removal of acute phenomena.

Currently, in the treatment of acute odontogenic purulent-inflammatory diseases of the maxillofacial region, a variety of methods are used, aimed both at the local focus of inflammation, and at the microorganism as a whole. A very important link in the treatment of inflammatory diseases of the maxillofacial region can be methods of local stimulation of soft tissue regeneration processes.

Platelet autoplasm is a highly active biological stimulator of regeneration processes due to various growth factors contained in alpha granules of platelets, acting on all structural units of the surrounding tissue and stimulating regeneration processes.

**Purpose of work.** To evaluate the effectiveness of the use of PRP-therapy in patients for the treatment of odontogenic inflammatory diseases of the MND.

**Materials and methods.** In the clinic of maxillofacial surgery of the Bukhara regional multidisciplinary medical center in the period from 2015 to 2019. there were 153 patients aged 17 to 70 years with odontogenic purulent-inflammatory diseases of the maxillofacial region against the background of diabetes. Among them were 64 men and 89 women. The duration of diabetes mellitus ranged from 3 to 18 years. In 70 patients, insulin-dependent diabetes was established, in 83 - non-insulin-dependent diabetes. Odontogenic phlegmon was diagnosed in 93 patients, an abscess in 24 patients, odontogenic osteomyelitis in 15 patients, odontic sinusitis in 21 patients

**RESULTS AND DISCUSSION:** In the general structure of patients with purulent-inflammatory diseases of the maxillofacial region against the background of diabetes, more than half (51.6%) of the patients observed moderate and severe course of the disease. All these patients were over 50 years old. In most of them, the course of the underlying disease was aggravated, in addition to diabetes mellitus, by two or three concomitant diseases: 38% suffered from hypertension, 47.8% from angina pectoris and atherosclerosis, 40.5% from obesity. Most patients were admitted to hospital in the later stages from the onset of purulent surgical disease.

The purulent process in these patients creates the prerequisites for the destruction of endogenous and exogenous insulin, which leads to an increase in insulin deficiency and thus to the decompensation

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of diabetes. Patients with diabetes who have developed a purulent process, from the moment of admission to the hospital need full intensive treatment aimed at both compensating for pathological altered metabolic processes and eliminating the purulent focus. There is no doubt that the key link in the treatment of purulent-inflammatory diseases of the maxillofacial region is etiotropic antibacterial therapy. From a practical point of view, the main importance is attached to the correct choice of antibiotic. It must be remembered that patients with diabetes require a special approach. In addition, the use of autologous plasma eliminates the possibility of allergic reactions.

The technical result of the method is achieved through the use of a new technique, namely: venous blood is collected from a patient in a volume of 10-25 ml, depending on the amount of inflammation, then the blood is centrifuged with an acceleration of 1000G for 6 minutes, after centrifugation are taken from the tube, 3,0 ml of the obtained plasma, then the syringes with the plasma are placed in a thermostat and incubated to obtain a gel, after which the obtained gel is cooled in a sterile tray for 3 minutes, then, using the connector, the syringe with the obtained gel is introduced into the infiltrate. The autoplasm obtained by centrifugation contains high platelets, which means the following growth factors: IGF (insulin-like growth factor), PDGF (platelet-derived growth factor), PDEGF (platelet-derived growth factor of endothelial cells), VEGF or PDAF (growth factor of vascular endothelium), EGF (epidermal growth factor), TGF- $\beta$  ("family" of transforming growth factor), - FGF (fibroblast growth factor).

Conclusions: Treatment of purulent wounds in the background of diabetes should be carried out with the participation of an endocrinologist under the control of criteria that objectively reflect the course of the wound process: cytological examination of wound prints, morphological examination of wound tissues, determination of tissue homeostasis in the lesion, quantitative and qualitative microbiological analysis. The use of the above methods, as well as the volume and direction of the therapy in each case, are the prerogative of the attending physician. Our study showed that treatment of odontogenic infection with an autothrombocyte mass makes it possible to stop a purulent lesion and shorten the healing time of a purulent wound due to the stimulating effect of platelet growth factors on bone and collagen metabolism, proliferation of vascular endothelial cells, and reduces the risk of complications.

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## CLINICAL AND FUNCTIONAL PREDICTORS OF THE DEVELOPMENT OF ACUTE ISCHEMIC STROKE IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION

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**Abstract.** In the last decade, much attention of researchers has been drawn to the study of problems at the junction of two areas of knowledge, an example of which is cardioneurology, which studies the relationship of the work of the heart and brain in health and disease, in particular in such socially significant diseases as cerebral stroke and myocardial infarction.

**Keywords.** pathogenetic heterogeneity, cardioneurology, cerebrovascular, decompensation.

New therapeutic and diagnostic achievements of modern medicine, the introduction of highly effective pharmacological agents into practice and the development of cardiovascular surgery still do not solve the problem of high mortality and disability in the development of myocardial infarction and acute cerebrovascular accident. It has been proven that immune mechanisms play an important role in the pathogenesis of myocardial infarction and acute cerebrovascular accident, but there is no consensus among scientists regarding their influence on the course of diseases and outcomes [2]. In the early stages of myocardial infarction, the development of complications of cardiac arrhythmias is preceded by a decrease in immunity in the form of a reliably significant decrease in the level of  $\alpha$ -interferon antibodies, which correlates according to the type of inverse close relationship with the heart rate [4]. However, knowledge about hemodynamic disorders that cause discirculatory phenomena in the brain, neuroreflex influences from the myocardium, changes in the physicochemical properties of blood, neurohumoral processes, metabolism and immune status do not solve the issues of etiopathogenesis and patterns of development of two vascular catastrophes. The combination of the two pathologies leads to the development of a painless form of myocardial infarction, without its inherent symptoms (pain, shortness of breath, fear of death, drop in blood pressure). The basis of painless myocardial infarction is an increase in the threshold of pain sensitivity, impaired conduction of pain impulses and individual characteristics of pain perception [3]. A change in the clinical picture of the disease is associated with the possibility of developing an arrhythmic form of myocardial infarction in the form of attacks of supraventricular, ventricular or nodular tachycardia, atrial fibrillation, and frequent extrasystoles. In some cases, the disease begins with an acute development of intraventricular or atrioventricular blockade. The cause of bradyarrhythmia is the presence of ischemic lesions in the vertebrobasilar system [3]. Russian scientists have proven statistically the correlation between the heart rate variability index and the degree of neurological deficit [4].

According to M.B. Budanova (2008) planning specific treatment and prophylactic measures in individual regions involves studying the frequency of CVD and the contribution of various risk factors to their development. [1] E.I. Gusev et al. (1997) proposed a four-stage system of care for patients with acute disorders of cerebral and cardiac circulation: prehospital - assistance is provided by a local therapist, a family medicine doctor, an ambulance or emergency doctor, and specialized neurological and cardiological ambulance teams; intensive care - is carried out in intensive care units, intensive care units or neurosurgical and cardiological departments; rehabilitation treatment - carried out in departments for the treatment of patients with acute disorders of cerebral and cardiac circulation (neurovascular and angiographic departments) or neurological and cardiological departments of a general profile, and then in rehabilitation departments and centers; dispensary provides for supervision by a neurologist, cardiologist and therapist of a district clinic. [2]

Despite advances in the diagnosis and treatment of OOMC and AMI in Uzbekistan, due to their fragmented nature, many questions remained outside the scope of research, which does not allow presenting a complete picture. The issues of complex rehabilitation of patients at various stages of stroke and heart attack have not been studied enough, methods and methods of rehabilitation measures in PHC conditions, hospitals, intensive care units and intensive care units, in sanatoriums, measures for the recovery of patients at various stages of providing them with medical care have not been studied and developed sick. Currently, prehospital care and hospitalization rates remain unsatisfactory everywhere, even in large cities.



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## ON THE QUESTION OF THE CAUSES OF THE DEVELOPMENT OF THE SYNDROME OF PREMATURE OVARIAN INSUFFICIENCY, TAKING INTO ACCOUNT SURGICAL INTERVENTIONS

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**Abstract.** A retrospective analysis and comparison of the results of the examination, treatment of postoperative management of 38 patients with benign ovarian tumors for the period 2014 - 20117, who were admitted to the emergency gynecology department of the Bukhara branch of the RSCOMP, was carried out. The patients were aged from 30 to 40 years. Of these, a follicular cyst – 7, an endometrioid cyst-12, a dermoid cyst-1, a mucinous cyst-5, a paraovarian cyst-3.

**Keywords:** premature ovarian depletion, cystectomy, menstrual irregularity, amenorrhea.

In the 2016 clinical guidelines, the European Society for Human Reproduction and Embryology (ESHRE) defines premature ovarian failure (POF) as a clinical syndrome, the main manifestation of which is the cessation of ovarian function before the age of 40, characterized by impaired menstrual function, increased gonadotropin levels and decreased estradiol concentrations. In the structure of gynecological morbidity of reproductive and late reproductive age, the specific weight of tumors and tumor-like formations of the ovaries ranges from 1 to 4.6 % . At the same time, the 1st place is occupied by the tumor-like formation of the uterine appendages 40-50 % . Duetotheremovalofovarian tumors, the follicular apparatus is depleted.

**Materials and methods research:** A retrospective analysis and comparison of the results of the examination, treatment of postoperative management of 38 patients with benign ovarian tumors for the period 2014 - 20117, who were admitted to the Department of Emergency Gynecology of the Bukhara branch of the RSCOMP, was carried out. The patients were aged from 30 to 40 years. Of these, the follicular cyst – 7, endometrioid cyst-12, dermoid cyst-1, mucinous cyst-5, paraovarial cyst-3.

Group 1 consisted of 27 patients operated with laparoscopic access. Group 2 included 11 patients operated on by laparotomy access. Before the operation, all patients underwent a general clinical study. In addition to the generally accepted instrumental and laboratory methods, blood cancer markers (CA-125) and a hemostasiogram were determined . Ultrasound of the pelvic and abdominal organs, MSCT were performed. The scope of the operation was decided individually, taking into account the anamnesis, age and reproductive status of the patients: Cystectomy-11, resection of the ovarian cyst-16, adnexectomy-2, ovariectomy-9. The patients were activated by the end of the 1st day after the operation. The average stay of group 1 patients was 2 days  $\pm$  1 k/d. Group 2: 5 $\pm$ 1 k/d. The postoperative period proceeded smoothly, the wound healing was primary. In 12 patients of the first group, there was a violation of the menstrual-ovarian cycle by the type of polymenorrhea. 13 patients of the second group had a violation of the menstrual-ovarian cycle by the type of amenorrhea for 2-4 months. When studying the long-term results after the operation with laparoscopic access, the reproductive function of the ovaries and the menstrual cycle were restored in a short time.

Thus, operations performed by laparoscopic access are less traumatic and contribute to the rapid recovery of the reproductive state of women of reproductive age.

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## GENE AND GENOTYPE POLYMORPHISM IN PATIENTS WITH OVERWEIGHT AND OBESITY

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Obesity remains one of the most serious health problems in the world today. Overweight and obesity are not only an aesthetic problem, but also serious problems of atherosclerosis and cardiovascular diseases, arterial hypertension, ischemic stroke and other internal organs. In addition, obesity can lead to independent or additional side effects of male or female infertility. In addition to specific reasons associated with lifestyle, some hereditary characteristics of the patient can contribute to the development of metabolic syndrome [4, 7].

Each person has unique genetic variants, and their identification and analysis will allow them to develop recommendations for lifestyle and physical activity changes that will lead to “additional opportunities for weight management.” “Gene analysis is done once in a lifetime because it does not change with age. Therefore, based on the analysis of genetic data, it is necessary to formulate a diet aimed at preventing overeating. This ensures longevity and reduces the disability associated with cardiovascular diseases” [2, 6].

Obesity is a sexigenetic disease caused by a complex interplay of hereditary and environmental factors. Overweight and obesity are currently among the top five risk factors for death. Obesity is a chronic relapsing disease that leads to many diseases and requires long, sometimes lifelong treatment. According to statistics, at least 3.4 million adults die each year due to being overweight or obese. In addition, 44% of excess body weight was associated with diabetes, 23% with cardiovascular disease and 7% with 41% with cancer [3].

According to the World Health Organization, from 1980 to 2013, the number of obese men worldwide increased from 28.8% to 36.9% and from 29.8% to 38% among women. The prevalence of obesity among children and adolescents is growing significantly in developed countries, reaching 23.8% among boys and 22.6% among girls. In Russia, about 25 percent of people of working age are obese and 30 percent are overweight. The projection for this condition is that by 2030 more than 2 billion people will be overweight and 1 billion will be obese [1, 5, 7].

The goal of the study. Determination of gene and genotype polymorphism in patients prone to overweight and obesity.

**MATERIALS AND METHODS.** The studies were carried out on 46 overweight patients hospitalized in 2019 in various departments of the Bukhara Regional Multidisciplinary Clinical Hospital. Of the 46 examined patients, 15 constituted the control group and 16 - the main group. Patients of 15 main groups have diseases of the cardiovascular system. In the above patients, height, body weight, overweight index, 3 different types of genes in the blood and their 7 different genotypes were identified.

**RESULTS.** Polymorphism of genes and genotypes in diseases of the musculoskeletal system was studied in 16 patients, the average age of patients is 47.4 years, including 7 men, 9 women, average height 166.8 cm, body weight 83.7 kg, overweight index on average 29.9, most of our patients have grade 3 overweight, and 1 patient has grade 1 obesity.

In the main group, the A / A genotype of the ADRDB2 gene (rs1042713) A ^ G was found in 7 patients in the main group, in 9 patients in the A / G genotype, and in the control group the A / A genotype of the ADRDB2 gene (rs1042713) A ^ G was found in 7 patients. The A / G genotype was found in 8 patients, which means that the A / A genotype of the ADRDB2 (rs1042713) A ^ G gene was relatively rare in both groups, while the A / G genotype was more common.

In the main group of the ADRB3 (rs4994) \_Trp64Arg gene, the Trp / Arg genotype was detected in 4 patients, the Trp / Trp genotype in 12 patients; in the control group, the Trp / Arg genotype of the ADRB3 (rs4994) \_Trp64Arg gene was found in both groups. The Trp / Trp genotype was detected in 12 patients in the main group and in 13 patients in the control group.

In the main group: the PPARG2 (rs1801282) \_C34G gene has three genotypes: the C / G genotype was found in 3 patients, the G / G genotype was found in 2 patients, and the C / C genotype was found in the remaining 11 patients. In the control group PPARG2 (rs1808), there were three gene genotypes: the C / G genotype was the same in both groups, the G / G genotype was found in 1 patient, and the C / C genotype was found in the remaining 9 patients.

Polymorphisms of genes and genotypes of cardiovascular diseases in a study in 15 patients on average 54 years old, of which 8 men, 7 women, average height 166.9 cm, body weight 83.5 kg, overweight index 30, 4 from our patients were grade 3 overweight and 4 patients were grade 1 obesity.

The A / A genotype of the ADRDB2 gene (rs1042713) A ^ G occurs in 7 patients in the baseline group and in 8 patients in the control group. The A / G genotype of the ADRDB2 gene (rs1042713) A ^ G is relatively common in 8 patients, in 7 patients in the control group, and less often in the main group.

The Trp / Arg genotype of the ADRB3 (rs4994) \_Trp64Arg gene was relatively common in 1 patient in general and in 2 patients in the control group. The Trp / Trp genotype of the ADRB3 gene (rs4994) \_Trp64Arg was found in 14 patients in the study group and in 13 patients in the control group. This means that the Trp / Trp genotype of the ADRB3 (rs4994) \_Trp64Arg gene is several times more common than the Trp / Arg genotype of the same gene.

There are three genotypes of the PPARG2 gene (rs1801282) \_C34G: the C / G genotype was more common in 6 patients in the initial group and relatively rarely in 4 patients in the control group. The G / G genotype of the PPARG2 gene (rs1801282) \_C34G was found in 1 patient in the main group and in 2 patients in the control group. The G / G genotype of the PPARG2 gene (rs1801282) \_C34G was found several times less frequently than the other C / G and C / C genotypes. The C / C genotype of the PPARG2 gene (rs1801282) \_C34G was relatively rare in 8 patients in the initial group, while the genotype The C / C of this gene was relatively frequent in 9 patients in the control group.

**CONCLUSION.** Thus, in the polymorphism of genes and genotypes in diseases of the musculoskeletal system and the cardiovascular system, the TRP / Trp genotype ADRB3 (rs4994) \_Trp64Arg gene was the most common in the primary and control groups, while (rs1801282) CC / PPARG2 gene C44G occurred relatively moderately in the control group. The A / A genotype of the ADRDB2 gene (rs1042713) A ^ G was found less frequently than the Trp / Trp and C / C genotypes. The G / G genotype of the remaining PPARG2 gene (rs1801282) \_C34G was found in 1 patient in the main group and 2 patients in the control group. The G / G genotype of the PPARG2 (rs1801282) \_C34G gene was several times less common than the other C / G and C / C genotypes in both systemic diseases.

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## DIFFERENTIAL DIAGNOSIS OF SYSTEMIC DISEASES IN CHILDREN AND CURRENT PROBLEMS.

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**Abstract.** This group of diseases is united by the common pathogenesis, pathomorphology, clinical picture, the positive effect of glucocorticoids, cytostatics, non-steroidal anti-inflammatory drugs and efferent therapy, as well as the absence of monoetiological factor a.

**Keywords.** pathomorphology, articular syndrome, collagenoses.

Clinical rheumatology as an independent scientific and practical discipline was formed about 50 years ago due to the need for a more in-depth study of diseases of this profile, caused by their wide spread, the expediency of a significant improvement in the diagnosis, treatment and prevention of multiple rheumatic diseases. They are based on systemic or local damage to the connective tissue, and the most frequent clinical manifestation is articular syndrome. There are more than 80 such pathological conditions, and therefore, in all countries of the world, much attention is paid to their nomenclature and classification.[2]

Since collagen accounts for a large specific gravity in the structure of connective tissue, these diseases are called collagen or collagenoses. These terms have now become rarities. It turned out that not only the collagen pathology determines the essence of connective tissue diseases, but also the involvement of all its components in the process, that is, diffuse damage. Therefore, a new rubrication was introduced - diffuse connective tissue diseases (DZST): an alternative terminology - "systemic connective tissue diseases". The list of nosological forms that make up the subclass of diffuse connective tissue diseases is still changing. The group of collagenoses previously included rheumatism and rheumatoid arthritis (juvenile rheumatoid arthritis), which were then excluded from the DZST, since rheumatism is a systemic disease of connective tissue with a predominant localization of the process in the cardiovascular system, but develops in connection with an acute infection ( $\beta$  - hemolytic streptococcus group A), and RA (JRA) is a chronic systemic connective tissue disease with a progressive lesion of mainly peripheral joints of the type of erosive-destructive polyarthritis. Therefore, at present, the DZST subclass includes a group of nosological forms characterized by a systemic type of inflammation of various organs and systems, combined with the development of autoimmune and immunocomplex processes, as well as excessive fibrosis.

Patients with AHI may have a picture of a nonspecific inflammatory process of unclear localization and nature, while only half of them have blast cells in the peripheral blood [2]. This clinical picture is due to the presence of tumor cells infiltrating organs and tissues, the formation of immune complexes, hypercytokinemia, hyperproduction of uric acid, the crystals of which can cause aseptic inflammation [1]. In patients with leukemia, the pre-leukemic stage is nonspecific, characterized by many "masks", associated with the predominant infiltration of blast cells of one organ or another, with the development of organ dysfunction. In some patients with AHZ, the symptomatology of organ damage dominates over hematological manifestations, which determines the existence of a large number of "masks" of the underlying disease [3]. Before the appearance of hematological signs of the disease, the symptoms of damage to the mucous membranes (ulcerative necrotic stomatitis), skin (exanthema), eyes (exophthalmos, hemophthalmos, retinal hemorrhage), abdominal syndrome (peritonitis) may dominate; lesions of the genitourinary system (changes in urine tests), central nervous system (neuroleukemia), lungs (cough, difficulty breathing, pulmonary hemorrhage) and bones; rheumatic "masks" (musculoskeletal pain, arthritis, pathological fractures) [4]. The latter can have up to 20% of children with leukemia [8]. According to the recommendations of the American College of Rheumatology (ACR), a large proportion of patients with sJIA can receive systemic glucocorticosteroids as starting therapy [4]. In real clinical practice, the proportion of patients with sJIA who received at least one dose of glucocorticosteroids approaches 100%. At the same time, it is known that if a child has acute leukemia, mistakenly regarded as the debut of sJIA, the appointment of even one dose of glucocorticosteroids can significantly reduce the number of blast cells in the bone marrow and postpone the time of making the correct diagnosis indefinitely [1]. The appointment of systemic glucocorticosteroids to a child with signs of a systemic inflammatory reaction should be as balanced and reasoned as possible, since such therapy can modify the course of the inflammatory

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process of any etiology - infectious, autoimmune, auto-inflammatory, or oncological.

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## FEATURES OF THE DYNAMICS OF PLANIMETRIC PARAMETERS DURING THE TREATMENT OF LONG-TERM NON-HEALING PURULENT WOUNDS OF SOFT TISSUES

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**Purpose of the study.** To study the dynamics of indicators of regenerative processes in the treatment of long-term non-healing purulent wounds (LNPW) of soft tissues.

**Material and research methods.** The study was based on 132 patients with soft tissue LNPW treated in the clinic of the Andijan state medical institute in 2016-2020. In all patients, purulent wounds were formed at least 14 days before admission, and the average duration of the presence of a wound was  $22.6 \pm 1.9$  days. All patients were divided into three groups, according to the method of treatment of LNPW. Two comparison groups were formed. The 1<sup>st</sup> comparison group - 54 patients in whom the analysis of the results for the comparative study was carried out retrospectively. Treatment of LNPW in this group was carried out according to the traditional method. The main group included 38 patients in whom the treatment of LNPW was carried out according to the proposed method. The domestic drug "FarGALS" was used as an antiseptic and wound-healing agent, as well as a photosensitizer for PDT. We used the Matrix laser apparatus as a radiation source for PDT. It uses a semiconductor emitter with a radiation power of 3 mW, spectrum - 337nm. Radiation is pulsed with a frequency of 100 Hz. The 2<sup>nd</sup> comparison group included 40 patients. For an objective picture in assessing the results, in this group, patients were treated only with the use of the drug "FarGALS". The age of the patients included in the study ranged from 25 to 75 years. Most of the patients corresponded to the age group from 45 to 60 years.

**Research results.** Comparative analysis of the dynamics of the area of the wound surface showed that in the 1<sup>st</sup> ( $393.9 \pm 23.2$  mm<sup>2</sup>) and in the 2<sup>nd</sup> comparison group ( $420 \pm 29$  mm<sup>2</sup>), the mean values 3 days after the start of treatment did not have significant differences in relation to the outcome, then as in the main group of patients, by this time a significant reduction in the wound area was noted - from  $437.3 \pm 24.3$  to  $351.2 \pm 19.6$  mm<sup>2</sup>. The regression of the wound surface area had a significant statistical difference between the groups by the 14th day after the start of treatment. With regard to the average period of wound cleansing, the best results were obtained in the main ( $7.1 \pm 0.5$  days) and the 2<sup>nd</sup> comparison group ( $9.3 \pm 0.7$  days), and had a statistically significant difference in relation to the indicator in the comparison group №3 ( $12.5 \pm 0.9$  days;  $t=2.89-5.30$ ;  $p<0.01-0.01$ ). Analysis of the dynamics of the area of wound epithelialization showed its increase by 7 days of treatment by  $39.1 \pm 0.3\%$  in the main group of patients, by  $22.8 \pm 0.7\%$  - in the 1<sup>st</sup> comparison group ( $t=22.74$ ;  $p<0.001$ ) and by  $30.9\%$  in the 2<sup>nd</sup> comparison group ( $t=16.76$ ;  $p<0.001$ ). In the main group, the increase in the area of epithelialization of the wound surface reached  $75.0 \pm 1.8\%$  by 14 days of treatment, which was also statistically the best results among the study groups ( $t=12.95$ ;  $p<0.001$  to the 1<sup>st</sup> group;  $t=3, 98$ ;  $p<0.001$  to the 2<sup>nd</sup> group). Four weeks after the start of treatment in the main group of patients, the process of wound epithelization was practically completed and reached  $98.7 \pm 0.5\%$  ( $t=2.83-7.11$ ;  $p<0.001$ ).

**Conclusion.** The introduction of a new method of combined local chemo-photodynamic therapy of long-term non-healing purulent wounds of soft tissues, aimed at the induction of anti-inflammatory and reparative action, allows, in a relatively short period of treatment, to accelerate the average period of wound cleansing, increase the regression of the wound surface area, increase the epithelialization processes and ensure complete wound regeneration.

## СОВРЕМЕННЫЕ ПОДХОДЫ К КОРРЕКЦИИ ИСТИМО-ЦЕРВИКАЛЬНОЙ НЕДОСТАТОЧНОСТИ

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**Аннотация:** Актуальными вопросами современного акушерства остаются проблемы невынашивания и преждевременных родов. Современная коррекция истмико-цервикальной недостаточности подразумевает сочетание хирургического метода и/или применение акушерского пессария с восстановлением микробиоценоза влагалища.

**Цель:** оптимизировать методы коррекции истмико-цервикальной недостаточности (ИЦН) с учетом срока гестации и акушерской ситуации. Выделяют следующие виды ИЦН: анатомическую – разрывы шейки матки 2-3 степени, частые внутриматочные вмешательства при искусственных абортах, диагностических выскабливаниях, поздних выкидышах и др., и функциональную – гипоплазия матки, пороки развития матки, генитальный инфантилизм, гиперандрогения. Частота данной патологии составляет 1-9 % в популяции и 15-42 % у пациенток с невынашиванием беременности [1,2]. Развитию ИЦН часто способствуют и сопутствуют инфекционные факторы невынашивания: неспецифические бактериальные агенты, персистирующая вирусная инфекция. Критериями постановки диагноза являются: анамнез, данные объективного обследования: осмотр в зеркалах, влагалищное исследование укорочение до 2 см и размягчение шейки матки, с открытием наружного зева, ультразвуковое исследование (УЗИ) (предпочтительнее трансвагинальное) ширина истмуса 0,8 см и более. При этом существует балльная оценка степени ИЦН с учетом УЗИ-данных. Традиционно существует хирургический метод коррекции ИЦН – это серкляж или наложение швов на шейку матки. Аспектами данной методики являются: сроки 13-24 недели, но не позднее 20 недель, проводить следует на фоне антибиотиков, иммуномодуляторов и эубиотиков, только в стационаре и на фоне токолитической терапии, механизм основан на механическом сужении цервикального канала. Данный метод не влияет на расположение подлежащей части. Существует и нехирургическая коррекция ИЦН: кольцо Гольджи и разгружающий акушерский пессарий. Аспектами применения данной методики являются: любой срок беременности, это амбулаторная процедура, показания такие же, как и при наложении швов, а так же профилактика или лечение прерывания швов. Так же важным аспектом применения пессария является угроза развития ИЦН, при этом низкая плацентация не является противопоказанием [2]. Однако не следует забывать, что при возможности наложения швов, пессарий не является основным методом. За счет введения пессария происходит уменьшение нагрузки на шейку матки, её сакрализация, «высокое» расположение подлежащей части, а так же механическое сужение цервикального канала.

**Материалы и методы.** В исследование было включено: 30 беременных, сроки гестации у них составили от 18-19 недель до 37 недель, которым вводился акушерский пессарий – 1 группа. 2 группа- 26 беременных, сроки гестации у которых составили до 18-19 недель, которым проводилось наложение швов (серкляж). 3 группу составили 16 беременных, в сроке гестации 18-19 недель, которым по результатам УЗИ-контроля после наложения швов проводилось введение пессария в 20-21 неделю, ввиду угрозы прерывания и несостоятельности швов, а так же низкого расположения плода. Показаниями для коррекции являлись: клинические признаки ИЦН, УЗИ – расширение внутреннего зева до 8 мм и более и/или укорочение шейки матки до 3 см и менее при трансвагинальном сканировании, прерывание беременности по типу ИЦН в анамнезе. При этом учитывались факторы в диагностике ИЦН: длина шейки матки менее 3 см при сроке до 20 недель – группа высокого риска по развитию ИЦН, в данной ситуации проводилось тщательное наблюдение 1 раз в 10 дней недели с оценкой УЗИ и

шейки матки в зеркалах, мазок выделений, бактериологический посев. Длина шейки матки 2 см – абсолютный признак ИЦН, требующий хирургической коррекции. В норме ширина шейки матки с течением беременности возрастает с 3 до 4 см с 10 по 36 недель беременности. Противопоказаниями для коррекции являлись: общие противопоказания для сохранения беременности (экстрагенитальная патология, пороки развития плода), повышенный тонус матки, не поддающийся коррекции, кровяные выделения, патология прикрепления плаценты, III-IV степень чистоты мазка из шейки матки или наличие патогенной флоры, для циркулярного шва – рубцовая деформация или резкое укорочение шейки матки. Перед проведением коррекции проводилась подготовка: микроскопия мазка, с санацией при необходимости, исследование на урогенитальные инфекции и неспецифическую флору с чувствительностью к антибиотикам и при необходимости их лечение, а так же исследование на другие факторы невынашивания беременности.

**Результаты и обсуждение:** Через 3 недели после проведения коррекции ИЦН проводилось исследование состояния микроценоза влагалища. Было выявлено, что в 1 группе I-II степень чистоты влагалищного мазка определялась у 86,7% беременных, во 2 и 3 группах этот показатель составил 57,7% и 62,5% соответственно. У остальных пациенток выявлялась III-IV степень чистоты, что свидетельствует о более щадящем воздействии пессария на микроценоз влагалища. При сравнительном анализе продолжительности сроков гестации после коррекции ИЦН было выявлено, что сроки родоразрешения в 1 группе составили  $39,8 \pm 0,5$  недель (39-40 недель), тогда как во 2 и 3 группах  $38,3 \pm 0,4$  недель (37-38 недель) и  $39,3 \pm 0,1$  недель (38-39 недель) соответственно. Интервал от момента удаления пессария/снятия швов до начала родов 1 группе составил  $13,9 \pm 0,6$  (12-14 дней). Во 2 и 3 группах  $4,3 \pm 0,2$  (3-6 дней) и  $9,1 \pm 0,6$  (7-10 дней) соответственно. После проведения коррекции ИЦН мы придерживались определенной тактики ведения: УЗИ-контроль 1 раз в 3 недели, микроскопия выделений и при необходимости дальнейший бак.посев с той же периодичностью, профилактическая санация 1 раз в 3 недели и по результатам мазка не менее 14 дней (предпочтительнее неспецифические препараты в жидких формах, и вагинорм-С), проводилась профилактика плацентарной недостаточности, токолитическая терапия с индивидуальной коррекцией, иммунокорректирующая терапия. Снятие швов, пессария производилось в 37-38 недель с последующей санацией при отсутствии показаний для досрочного снятия (кровяные выделения, родовая деятельность, сократительная активность матки после 36 недель гестации, явления хориоамнионита, излитие вод). При анализе течения беременности после коррекции ИЦН самым частым выявленным акушерским осложнением была угроза преждевременных родов, составившая в 1, 2 и 3 группах 16,7%, 23,1% и 43,8% соответственно. Существенно реже встречалась плацентарная дисфункция и – гипертензивные нарушения менее 8% во всех группах, случаев синдрома отставания роста плода, преждевременной отслойки плаценты, антенатальной гибели плода или прерывания беременности выявлено не было. При анализе течения родов обращала на себя внимание более чем в 2 раза большая частота быстрых и стремительных родов во 2 и 3 группах исследования, за счет укорочения латентной фазы родов. При анализе исходов родов достоверных отличий по группам выявлено не было, при этом во 2 группе было выявлено 4 случая преждевременных родов, ввиду прорезывания швов в 33-34 недели гестации. Обращает на себя тот факт что, во 2 и 3 группах чаще выявлялись осложнения течения послеродового периода: субинволюция матки, перинатальные инфекционные осложнения, травмы шейки матки (в родах).

**Выводы:** применение акушерского пессария изолированно или после наложения швов является наиболее эффективным и альтернативным методом коррекции ИЦН, с минимальным влиянием на микроценоз влагалища. Данный метод приводит к снижению частоты угрозы и самих преждевременных родов, а так же к снижению частоты гнойно-септических осложнений в послеродовом периоде.

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## PHILOLOGICAL SCIENCES

### THE CONCEPT “HEART” IN THE LANGUAGE OF THE KAZAKHS OF KARAKALPAKSTAN

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**Key words:** dialect words, somatism, phraseological unit, literary language, concept, semiotic code, emotion.

**Annotation:** The article examines dialectal differences in the language of the Kazakh people of the Republic of Karakalpakstan. Somatic phraseological units with anatomical body parts are confirmed by examples in comparison with the Kazakh and Karakalpak literary languages. Ethnocultural differences of the concept “heart” are shown, dialectical and literary variants of somatic phraseological units are analyzed.

The human organ of the heart is productive in expressing the inner world, mood, feelings and psychoemotions of a person. The heart is also a direct symbol of the human soul. This is because if a heartbeat means that a person acts and lives, then on the contrary, it means that he stops beating and dies.

The heart is located inside the human body, in the middle of the body compared to other organs. The heart is the source of the inner peace and emotional image of a person.

In the dialects of the Kazakh language, there are a number of idioms with soulful words. For example, in the language of the Kazakhs of the Ural and Janibek regions of Kazakhstan, the heart means the whole body, the main meanings, “ju’regi awnamaw” (heart failure) - in the language of the Kazakhs Almaty and Jambul, “ju’regi seskenbeydi, beti kaitpaidi” (the heart did not tremble), the heart on in the language of the Kazakhs of the Semey and Abay region, “ju’regi shayliqti” means sickness after a fatty meal, in the language of the Kazakhs of Almaty and Jambul “ju’regi shig’u” means to be very afraid “[1: p. 302].

The heart refers to human behavior, joys, sorrows, revitalization, retirement, cowardice or heroism, nutritional illnesses, and exposure to negative and positive emotions.

In the meaning of human behavior: “ju’regi qara” - a dark heart, is a person with bad intentions and thoughts, “ot ju’rek” a hot heart is a person with a stubborn, elbow-like character. For example: “Oqiwdan qayta-qayta jig’ila berip ju’regi tas bolip qalghan” (Shymbai district, Kamisarik village).

To have a stone heart means cruelty. Usually the words that convey the meaning of color are intertwined with the names of human organs, and when the word black comes from them with the word heart, it means a bad, unpleasant emotion in a person. At different times, it has a black or white meaning and means an antonymous relationship.

Phraseological units with the word “heart” also have meanings that work and are associated with digestion. This was due to the proximity of the digestive tract to the stomach and heart, and also to the fact that digestion is closely related to the internal organs of the body. For example, “ju’reklew”, indigestion, nausea, “ju’regi awitqiw” indigestion, “ju’regi awzina keliw” - heartburn.

The heart, as a part of the body, also serves as a measure of a person’s health and morality. For example: Seilkhan jo’telse de ju’regi awzinan korinedi (Kegeyli district, Arshan village). Ja’rdem sorasan’, ju’regin de julip beretu’g’in adam (Takhtakopir district, Qara-Oy).

It means human health. Na’restenin’ juregi jasayman dep attin’ juregindey u’rip tur (Qaraozek district, village of Qostamgaly). Jureginde ga’p joq, sag’attay islep tur (Amudarya region, Kazakh village Basu). A horse is a strong animal, and a human heart attached to the limbs of this animal means a strong and healthy person.

In the language of the Kazakhs of Karakalpakstan, phraseological units with the word heart also mean cowardice or human heroism.



In the language of the Kazakhs of Karakalpakstan, an instruction with a semiotic heart code, that is, with a reference, has a number of significant expressions. In particular, the semantic expression in the Kazakh literary language is practically absent.

Ju'regine g'ul-g'ula saldi - 1. A young man or a young woman expresses and encourages each other through a feeling of indifference; 2. Means a person's concern for any situations.

Sultangubieva Aygul, who studied the concept of the heart in comparison with the Kazakh, Russian and English languages, noted: "The language is also determined by the ethnic nature of the worldview, spiritual and national differences of people" [p. 2:24]. In the language of the inhabitants of this region, its spiritual, cultural, geographic, climatic and relief features are also realized in the same way as it is associated with human organs.

Ju'regi da'rya, ju'regi telegey ten'iz adam is a sign of a person's character, which means that there is no arrogance or generosity in a person. Because the hydronymic indicators include rivers, seas and lakes that are characteristic of the Karakalpak region.

The somatic phraseological unit of the heart is dialectical in nature and is found in the northern and southern dialects of the Karakalpak language, as well as in the concept of human consciousness. In the southern region of Karakalpakstan, in the village of Hamirabad in the Turtkul region, Ju'reginin' qurti bar means "this is a person with conscience and honor." For example, sa'l ju'reginde qurti bar adam kela' berdi (Turtkul, Hamirabad), and in the language of the inhabitants of the northern dialect of the Chimbay region, jurek tiqpa - the name of the disease is heart attack, bronchial asthma (Chimbay region, the village of Myn'jir) [3: p. 131].

In the language of the Kazakhs of Karakalpakstan, there are also the following units related to human health. Ju'regi qait boldi - not wanting to do again after failures in work, disappointment and grief, and ju'regi sazuw - means to be hungry.

Keshirim sorawg'a ju'regi da'w bermedi (center of Chimbay region) - means boldly expressing his inability to express his opinion, has the qualities of management, direction and resolution of human consciousness, actions, which means that this person has a high level of consciousness.

Kishi aqlig'im ju'regi sha'wkildep juwira keldi (Shumanai, the village of Sheriushi). A heartbeat is a person's reaction to any action, situation, condition, a sudden, unexpected action, an obvious manifestation of his feelings for him, a frequent heartbeat.

Therefore, even in dialectical somatisms, the concept heart is one of the most important concepts of human culture. It is a unit that reflects its main elements and contains their meaning.

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## HOW TO TEACH LISTENING EFFECTIVELY IN EFL CLASSROOMS?

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**Abstract:** This article shows the effective and innovative ways of teaching English in EFL classrooms. It includes essential factors of the teaching process, such as, strategies to use in the classroom, difficulties which learners may face, mechanism of cooperative learning, motivation and how to give good instructions to learners.

**Key words:** accent, methodology, motivation, speed, psychology of teaching, assimilation, pronunciation, characteristics of environment, listening comprehension, intonation, sound system.

### Introduction

Most learners of new language find listening as the most difficult skill to master. The reason for that could be that listening is regarded as one of the most complex skills. However, learning a language depends on listening, due to the fact that it is one way of receiving information and getting oral input which serves as the main factor for the acquisition of foreign languages and opens the way for learners to start communication. Chair Professor of Applied Linguistics at the University of Hong Kong David Nunan tries to explain listening as a predominant skill and describes as: “Listening is the Cinderella skill in second language learning. All too often, it has been overlooked by its elder sister: speaking. For most people, being able to claim knowledge of a second language means being able to speak and write in that language. Listening and reading are therefore secondary skills -means to other ends, rather than ends in themselves.” [2; 1] Another researcher Bourke considers songs as one of the most enjoyable ways to practice and develop listening skills. He claims that any syllabus designed for teaching English as a Second/Foreign Language (ESL/EFL) to young learners (YLS) typically contains songs, chants, and rhymes [1; 4]. In human’s nature musical expression plays an essential part, and young learners more than welcome for listening songs and respond enthusiastically to them. Listening in a foreign language is hard work; therefore, there are diverse listening activities such as songs, spelling games, dictations and others, which could be developed in order to give the teacher a chance to encourage the students, in such a way, that they start to feel motivated and enjoy what they do. In order to build up the listening skill in students, teachers have to make use of their creativeness, presenting innovative proposals, for example games, which not only allow the students to cope effectively the teacher’s demands, but also offer the learners the opportunity to enhance their communicative competences, attributable to the interaction students keep among them. Vivian Fabiola and Robinson Restrepo say as: “Listening in a foreign language is hard work; therefore, there are diverse listening activities such as songs, spelling games, dictations and others, which could be developed in order to give the teacher a chance to encourage the students, in such a way, that they start to feel motivated and enjoy what they do. In order to build up the listening skill in students, teachers have to make use of their creativeness, presenting innovative proposals, for example games, which not only allow the students to cope effectively the teacher’s demands, but also offer the learners the opportunity to enhance their communicative competences, attributable to the interaction students keep among them.” [10; 9]

### Importance of Listening

Listening is assuming greater and greater importance in foreign language classrooms. There are several reasons for this growth in popularity. By emphasizing the role of comprehensible input, second language acquisition research has given a major boost to listening. As Rost points out, listening is vital in the language classroom because it provides input for the learner. Without understanding input at the right level, any learning simply cannot begin. He provides three other important reasons for emphasizing listening, and these demonstrate the importance of listening to the development of spoken language proficiency.

1. Spoken language provides a means of interaction for the learner. Because learners must interact to achieve understanding, access to speakers of the language is essential. Moreover, learners’ failure to understand the language they hear is an impetus, not an obstacle, to interaction and learning.

2. Authentic spoken language presents a challenge for the learner to attempt to understand language as native speakers actually use it.

3. Listening exercises provide teachers with the means for drawing learners’ attention to new

forms (vocabulary, grammar, new interaction patterns) in the language. [2; 2]

Why listening is difficult?

Many of the differences between reading and listening illustrate just why listening is considered a difficult skill. The difficulties can be grouped into four general categories; characteristics of the message, the delivery, the listener and the environment. [7; 12]

Characteristics of the message

Some time during the 1980s a software company was invited to say a sentence which would then be 'recognised' by a computer and displayed in written form for all to see. The participant, deciding to stay on topic, said, 'It's hard to recognise speech'. The computer promptly, and to much laughter, flashed up, 'It' hard to wreck a nice beach'.

This story may be apocryphal-although Bill Gates admits that Microsoft's speech. As Rick Altman wrote, 'For us [teachers], listening is like reading speech. For students it is more like finding the objects hidden in the drawings of trees'. Knowing the written form of a word is no guarantee that students will recognize the spoken form. As already mentioned, recognizing word boundaries is problematical, but also the irregular spelling system of English does not help matters. A sentence such as:

Would probably cause problems for students to pronounce even if they 'knew' the words, because of the variety of ways in which one combination of letters (ough) can be pronounced.

There are also, of course, 'slips of the ear'-simple mishearing-as when the anti-hero of Bret Easton Ellis's novel *American Psycho* hears 'murders and executions' instead of 'mergers and acquisitions'.

Characteristics of delivery

Mode of delivery is a vital factor. It may be helpful here to distinguish between reciprocal and nonreciprocal listening. Reciprocal listening involves interaction between two or more people; in other words, there is a conversation. Reciprocal listening allows the use of repair strategies: speakers can react to looks of confusion by backtracking and starting again; listeners can ask for clarification, ask the speaker to slow down, etc.

Nonreciprocal listening describes a situation in which the listener has no opportunity to contribute to a dialogue, for example while watching TV or listening to the radio. In these situations, the listener's lack of control over the input is a crucial issue. The listener has no influence over factors such as the speed at which the speaker talks, the vocabulary pronunciation renders it incomprehensible. It seems surprising to us now, but when American 'talkies' were first shown in the cinema in Britain, audiences had great difficulty in understanding the American accent.

For all of above reasons, nonreciprocal listening is usually regarded as more difficult reciprocal listening.

Characteristics of the listener

As many teacher can testify, some students get sidetracked easily and simply lack the ability to the sustain concentration. Other students have problems motivating themselves to listen. They are often long-term issues.

Yet other students learn better using modes that are different from listening. According to Multiple Intelligences theory, people possess different 'intelligences', such as linguistic, logical-mathematical, spatial, bodily-kinaesthetic, musical, interpersonal and naturalist. These can be related moods of learning. Most people, at some unconscious level, relies they are more predisposed to one way of learning than two another. Someone with musical intelligence may choose to learn a language through listening to songs; someone with bodily-kineasthetic intelligence might prefer to learn by acting moving to sounds or physically piecing together words on wooden blocks.

Besides the students individual dispositions there is the age factor. Young learners can be loosely categorized as anything from the age of seven or eight (younger than this may be considered very young learners) up to those in their meet to late teens. Students add this age differ from adults considerably in their needs as listeners. Some of these differences may include shorter attention spends, fewer cognitive abilities, difficulties, concentrating on disembodied voices and the importance of visual stimuli and music. Another consideration in children's familiarity and confidence with multimedia material, particularly when they reach their teenagers, which often surfaces that of older generations.

Characteristics of environment

Environmental conditions which may affect listening performance include the temperature of the room (hot rooms induce sleep), background noise heavy traffic, for example (or defective equipment which affects the clarity of a recording).

Another problem which does not fit neatly into any of our other categories is the role of memory

in listening. As we process on word, another word is ‘in coming’. The mind gets flooded with words. Unless we are well attuned to the rhythm and flow of the language, and the way in which piece of discourse is likely to continue, this can lead to overload, which is one of the main reasons why students ‘switch off’. The idea may be heresy to poets, but the mind isn’t really concerned with individual words. We tend not to remember this with any exactitude, but rather the general meanings that they convey. Jack Richards states that ‘memory works with propositions, not with sentences’. Many of our students are faced with badly-conceived tasks that test their memory in state of guiding them towards comprehension. [7; 14]

#### The role of Songs in teaching listening

According to Cullen, songs are significant teaching tools in teaching ESL/EFL because, as most teachers find out, students love listening to music in the language classroom and they often holds strong views about music. This affinity with music makes songs vital tools to create a safe and natural classroom ethos and to overcome feelings of shyness and hesitation on the part of the learners.

Because of their limited attention span,

YLS need a variety of activities. YLS are often shy, and they should join in classroom activities when they feel ready rather than when the teacher demands—an opportunity that songs create.

The learning characteristics of YLS also reveal a need to develop a strong emotional attachment to their teacher. Listen and Do songs support this attachment since the students and the teacher are physically involved in doing the same actions; that is, they share a common experience. The students’ education, including language education, is a process in which they should be encouraged to contribute physically, emotionally, and intellectually. This type of learning environment is best achieved when the teacher creates a safe, nonthreatening context within which learners can play with language. [8; 11]

Using games are fun ways of practicing listening

#### Simon Says

Simon Says is a great go-to listening game. It’s practically perfect for teaching with Total Physical Response. When your students play Simon Says, they will have to follow simple commands and move their bodies in the way you direct them. If the teacher commands with the phrase ‘Simon says’ children should do them. If the teacher misses this phrase, children should not follow his commands.

This game is also great for reviewing vocabulary or grammar structures if you make a point of including them in your verbal directions

#### Listen and Draw

If you have kinesthetic students who struggle to express themselves in English, Listen and Draw isolates listening from speaking. Simply have your students take out a blank piece of paper and give them instructions on what to draw.

For example, you might say the following:

- Draw a square in the center of your paper.
- Draw a triangle on top of the square.
- Draw a small rectangle inside the square, at the bottom.
- Draw two small squares inside the square near the top.

If your students listen correctly, they will have drawn a house (or something like it), and you will be able to tell with one glance whether they understood your directions.

Of course, you can make Listen and Draw as complicated as you like depending on the skill level of your students. This activity is particularly useful for reviewing vocabulary of colors, shapes and prepositions of location.

#### Movie Vocabulary

Have students listen for specific vocabulary in a favorite movie clip. Before class choose a movie clip and prewatch it, noting any interesting or unusual vocabulary. Type up the words in list form. Keep them in order for an easier listening activity and randomize them for a more challenging activity.

In class give your students copies of the vocabulary list. Review the pronunciation with students and then play the movie clip for them. Have students mark off the words as they hear them. After watching the clip, see who heard the most words and discuss the meaning of any words your students don’t already know.

#### Music to My Lexicon

Choose a song to play for your class. Anything will work, so try and match your song to the personality of your class. Before class, make a list of interesting vocabulary words that appear in the



song.

Give the list to your students and review the pronunciation of each word. Then play the song for them and let them cross off the words on the list as they hear them. [12]

Listen for it!

One of the most essential listening skills your students should develop involves listening for key information, which often includes numbers, facts, hours, dates or other essential info. To help them train for this skill, first give them some context: You will listen to a man asking for information at the train station. Then, before they listen, give them something they will have to find out: What time does the train to Boston leave? Now here comes the “game” aspect of it. You can:

- Divide the class into teams and have a team member raise their hand/ring a bell as soon as they hear the answer. Then, you do the same with another short audio track. You ask a question and play the audio; the team that answers first gets a point. And the team with the most points at the end wins.
- Have each student participate individually, but make sure everyone participates, not the same students over and over again

Unmusical Chairs

This easy listening game works great with young learners. Arrange chairs as if to play musical chairs. Students will walk around them, but in this case they won't be listening to a song. They will listen to a conversation. As always, give them the context and ask them a question: *What is Tom's favorite food?* Students walk around the chairs as you play the audio and the student/s who hear the answer to the question sit/s down. Pause the audio. Those who are seated answer the question, and if it's correct they will remain seated. If several students sit down at the same time, that's fine, but ask them to whisper the answer in your ear to make sure they all heard the answer from the audio. [11]

Problems faced learning listening and their solutions

There are various problems that learners may face while mastering listening. They are quality of recordings, lack of vocabulary, number of speakers, different accents, and speed of speakers. And solution for them can be motivating students, working cooperatively, developing learner-centered teaching, creating an effective classroom learning environment and so on.

Quality of recordings

As suggested earlier, in many classrooms around the world, much of the listening input comes in the form of recorded materials. In such situations, the quality of the recordings is an important aspect of delivery. These days, professionally produced material is recorded in a studio and the sound quality is generally high. Teachers attempting to make their own listening material sometimes find, however, that their own recordings, made perhaps on old machines, contain distortion and lack clarity.

Speed and numbers of speakers

There are other issues related to the recording itself, such as speed. Rapid speech, such as that heard in BBC news headlines, is more difficult for students than the speech rates of, say, an adult talking to young. The number of speakers is a further issue. The more speakers there are, the more potential there is for confusion, especially when there is no visual backup for the students. [7.29]

Creating an effective classroom learning environment

Classroom climate refers to the ‘affective’ side of the classroom, that is, the feelings the students have toward the lesson, to the teacher and other students, and the learning atmosphere of the classroom. As a teacher you will need to find ways of helping your students develop a positive view of you and of their class so that they have positive expectations for you and your lessons. Senior, citing Ormond, suggests that in order to create an effective classroom climate teachers need to do the following:

- Communicate acceptance or respect for and caring about student as human beings;
- Establish a businesslike, yet nonthreatening atmosphere;
- Communicate appropriate messages about school subject matter;
- Give students some sense of community among the students. [5;107]

Brown and Yule (1983) suggest that there are four principal sets of factors affecting the difficulty of listening.

1. Speaker factors: How many speakers are there? How quickly do they speak? What types of accents do they have?

2. Listener factors: What is the listener's role -eavesdropper or participant? What level of response is required? How interested is the listener in the subject?

3. The content: How complex is the grammar, vocabulary and information structure? What background knowledge is assumed?



4. Support: How much support is provided in terms of pictures, diagrams or other visual aids? [2; 7]

The importance of pronunciation in teaching listening  
Accent

There has been much comment in recent years about world “Englishes”. The English spoken downtown New York is very different from English in Delhi or Trinidad or London. This raises the question of which type of English students should listen to and take as a model. Some European commentators believe that ‘standard British English’, such as that heard on the BBC news, is the best model, while countries with more contact with the US, such as Brazil and Japan, tend to learn a variety of American English. Others say that we need to teach international English (which has fewer idioms and colloquial phrases than, say, British English), a variety that can be understood by everyone. What is likely is that local dialects spoken by minorities will pose great problems for foreign learners when it comes to listening. For this reason, most professional recorded materials, at least for the European market, tend to favour a southern English standard accent. There is, however, a growing belief that students should be exposed gradually to a variety of accents as they become more proficient. This belief is reflected in recent professionally produced materials. [4. 49]

Another factor to take into account is that, these days, there is perceived to be less need for students to speak like the English, Australians, North Americans or any other native speakers. Most English is spoken between non-native speakers, and teachers generally don’t need to sound like speakers in order to provide good models for students to listen to.

We have so far looked at certain factors that make a good listening text. This leads us inevitably to the question of whether the text should be authentic or not. [7. 30]

*The characteristics of spoken English*

In recent years, with the advent of text-messaging and chat rooms, writing has begun to assume some of the features of speaking: informality, lack of attention to punctuation, transience, real-time interaction. As Jeremy Harmer writes, ‘on the internet, live sessions are not called chats by accident’. Indeed, the word ‘chat’, for many teenagers and children, is associated more now with reading and writing than speaking and listening. [7.10]

Listening and reading both involve the decoding of messages, but there are, of course, significant differences between the two. Firstly, reading takes place over space-pages, signs, the backs of envelopes-whereas listening takes place over time. Most oral data is not recorded and has no permanent record. It is based on spontaneous performance, an invisible ink that usually disappears from the memory within seconds.

Because listening takes over time, not space, the gaps between words that exist in writing do not exist in speech, so the listener imagines them into being. This segmentation of words from the flow of speech (recognizing word boundaries) is often problematic for listeners and occasionally amusing. Rock guitarist Jimi Hendrix didn’t sing, ‘scuse me while I kiss this guy, but ‘scuse me while I kiss the sky, and, if you believe one well-known linguist, the words of the hymn, ‘Gladly my cross I’d bear’ are routinely thought to be about a cross-eyed bear. In fact, to listeners, speech sometimes comes across like this:

Wheretherearenonaturalpausescausedbythespeaker’sbreathingtheflowofspeechisonelongsound.

Elision is when sounds are omitted, usually from the beginning or end of a word, in order to make pronunciation of the utterance easier for the speaker. For example:

She sat next to the wall.

The ‘t’ of ‘next’ is elided into the ‘t’ of ‘to’ so that it becomes /nekstə /, but we know that she did not sit necks to the wall (we can safely assume that she only has one neck).[7.11]

Assimilation takes place when the first of a series of sounds changes to accommodate subsequent sounds. This often happens because the tongue cannot get into place quickly enough during connected speech to articulate the next sound. For example:

Tony’s a heart breaker.

The sound ‘t’ in ‘heart’ changes to either a glottal stop or a ‘p’ in this context: (/hɑ:pbreikə/) though tony breaks girls’ hearts, not harps.

Intrusion is when a sound is added in order to allow the speaker to link two words more easily. For example:

He doesn’t have an original in his head.

Speakers of British English often add intrusive ‘r’ sound between ‘idea’ and ‘in’ (/ɑ:rdiərɪn/); it

sounds as though he doesn't have an original 'eye-deer' in his head, whatever that may be.

Another feature of pronunciation is that formulaic phrases are often chunked; this means the phrases are said rapidly as if they are one word. For example:

/nəʊndəmi:n/ for 'know what I mean?'

/gɪmi:əbreɪk/ for 'give me a break'

All of these are potentially problematic for listeners, though not for readers.

Modern Methods of Teaching Listening Skills

One effective and nonthreatening way for students to develop stronger listening skills is through interpersonal activities, such as mock interviews and storytelling. Assign the students to small groups of two or three, and then give them a particular listening activity to accomplish. For example, you may have one student interview another for a job with a company or for an article in a newspaper. Even a storytelling activity, such as one that answers the question "What was your favorite movie from last year?" can give students the opportunity to ask one another questions and then to practice active listening skills.

Video Segments

Another helpful resource for teaching listening skills are video segments, including short sketches, news programs, documentary films, interview segments, and dramatic and comedic material. As with audio segments, select the portion and length of the video segment based on the skill level of your students. With your students, first watch the segment without any sound and discuss it together. Encourage the students to identify what they think will be the content of the segment. Then, watch the segment again, this time with sound, allowing students to take notes if helpful for their skill level. After the completion of the video segment, you can have students write a brief summary of the segment, or you can take time to discuss as a group how the segment compares with the students' expectations.

Audio Segments

You can also teach listening skills through audio segments of radio programs, online podcasts, instructional lectures and other audio messages. You should model this interactive listening process in class with your students, and then instruct them to repeat the exercise on their own. First, instruct students to prepare for listening by considering anything that they will want to learn from the content of the audio segment. Once they have written down or shared these ideas, then play the audio segment, allowing the students to take notes if helpful. Once they have gained confidence and experience, repeat this activity but instruct students to not take notes until the completion of the audio segment. You can use shorter or longer audio segments, and you can choose more accessible or more challenging material for this type of exercise. [14]

Effective ways of teaching listening

As there are so many teachers in the world, each has their own preferred methods and ways of teaching. According to Lee Watanabe-Crockett here are given 10 ways of teaching listening :

1. *Stop talking*: If you're talking, you're not listening. Quiet yourself, your responses, and your interjections. Be open and available to what is being sought by the other person through your listening.

2. *Get into your listening mode*: Quiet the environment. Mentally open your mind to hearing by getting comfortable and engaging in eye contact.

3. *Make the speaker feel comfortable*: Examples of this might be nodding or using gestures. Seating is also important. Decide if the speaker will feel more comfortable if you stay behind your desk, or if you took a chair beside them. For smaller children, get at their eye level instead of towering over them.

4. *Remove distractions*: This is something you might not think of at first. It means things like clearing the room, quieting screens, and silencing your phone, If the speaker requests privacy, honor that by closing the door or asking others to give you a few minutes in private.

5. *Empathize*: At the very least, try "learning instead to embrace and wonder at their "otherness."

6. *Be comfortable with silence*: Some people really need time to formulate a thoughtful response. Rushing them through, or suggesting what they want to say, robs them of the opportunity to communicate honestly.

7. *Put aside personal prejudice*: This is also quite difficult, as our experiences form who we are. Putting all those experiences aside is a skill which requires help and practice.

8. *Heed the tone*: Sometimes the tone can hide the meaning of the words, and sometimes the tone enhances the meaning of the words. Know which is which.

9. *Listen for underlying meanings, not words:* Listen first for comprehension, and then a second time for ideas.

10. *Pay attention to non-verbal communication:* People communicate through body language and facial expressions. This is why eye contact is necessary. [13]

Strategies used in listening

There are different types of strategies, such as, metacognitive, cognitive, social or affective, bottom-up, top-down and others.

Top-down strategies are listener based; the listener taps into background knowledge of the topic, the situation or context, the type of text, and the language.

This background knowledge activates a set of expectations that help the listener to interpret what is heard and anticipate what will come next.

Top-down strategies include

- listening for the main idea
- predicting
- drawing inferences
- summarizing

Bottom-up strategies are text based; the listener relies on the language in the message, that is, the combination of sounds, words, and grammar that creates meaning.

Bottom-up strategies include

- listening for specific details
- recognizing cognates
- recognizing word-order patterns [3.15]

Social/affective strategies represent a broad grouping that involves either interaction with another person or ideational control over affect. Generally, they are considered applicable to a wide variety of tasks. The strategies that would be useful in listening comprehension are:

1. Cooperation, or working with peers to solve a problem, pool information, check notes, or get feedback on a learning activity;
2. Questioning for clarification, or eliciting from a teacher or peer additional explanation, re-phrasing, or examples; and
3. Self-talk, or using mental control to assure oneself that learning activity will be successful or to reduce anxiety about a task. [6.45]

Conclusion

Listening comprehension is an important language skill to develop. Language learners want to understand target language of the speakers. Listening is not an easy skill to acquire because it requires listeners to make meaning from the oral input by drawing upon their background knowledge and produce information in their long term memory and make their own interpretations of the spoken passages. In other words, listeners need to be active processors of information. [7; 28]

While teaching young EFL learners, sometimes it is difficult to interact and to understand the spoken English language, because they do not have a good input in terms of vocabulary, authentic material and listening background in the target language.[ 10;73] In that case, teachers should adapt some materials which are too difficult, out of date or cultural inappropriate for the learners. In addition to this, teachers ought to design their own materials which are suitable for learners' age, personality, interests and learning styles. For example, if there is given a listening task about agriculture or something which is not enjoyable for learners, the teacher should miss it and give another task according to children's interests and needs. If the recording is really culturally inappropriate to the learners or there are some misunderstandings, the teacher may create recordings by himself.

In this paper, I have set out some of the theoretical aspects of listening comprehension. I have suggested that listening classrooms of today need to develop both bottom-up and top-down listening skills in learners. I have also stressed the importance of a strategies-based approach to the teaching of listening. Such an approach is particularly important in classrooms where students are exposed to substantial amounts of authentic data because they will not understand every word.

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## LINGUOPRAGMATIC APPROACH TO THE TEXT ANALYSIS IN ENGLISH

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**Annotation:** The article deals with the role of linguopragmatic approaches to the text analysis. Furthermore, we attempt to make comparisons and contrastive analysis. The article also studies thoroughly the problem of pragmatic intentions. The linguopragmatic analysis is based on lexicogrammatical and linguostylistic ones, and it appears to be their logical continuation in respect of linguopragmatic interpretation of the received data.

**Keywords:** Pragmatics, Pragmalinguistics, Linguopragmatics, Pragmatic intentions, The addresser (author, sender, speaker) and the addressee, communicative linguistics, deautomatization, linguistic personality, literary discourse.

In its general sense, Linguopragmatics which is one of the trends of communicative linguistics can be defined as a science studying language factors within the sphere of human activity with an accent on psychological, social and cultural aspects of language functioning. *Ariel*'s point is that—Pragmatics is from Latin word *pragmaticus* from the Greek, meaning amongst others “fit for action”, which comes from “deed, act”, “to pass over, to practise, to achieve” [1;2010]. Linguistics in pragmatics: the study of peculiarities of language usage related to speakers' insight of the structure and expressive resources of the language itself rather than of the social context. **V. Dresslar** claims, “Pragmatics is not related to Linguistics. Thus, we should not confuse”. Majority of linguists may challenge this assertion, however the existence of countless scientists who are pragmatically languishing is an issue. [2; 18-19] bulk of them convincingly argue that pragmatic as a linguistic one, a kind of language school, and a special aspect of speech and language learning.

Pragmalinguistics includes a wide range of issues, yet the most appropriate of them for linguistics are: speech strategies and speech impact; pragmatic intentions and their types; appropriateness and effectiveness of textual communication.

It is the oral activity, which is considered as purposeful social activity, and as the component taking part in interaction of people and mechanisms of their cognitive processes. The terms of “text” and “discourse” are similar to each other, yet not equivalent. Text is a part of discourse; it is produced in the process of discourse. Although there is a glaring dissimilar features between the notions of text and discourse, they are inseparable since they are closely correlated with one another in terms of their users. Even though various scholars define discourse in various ways, they all hold the assertion that discourse is interpreted in the context and based on specific situation. Majority of prominent linguists that in the process of discourse analysis, particularly in literary review, linguistic, social, pragmatic, cultural, psychological factors of communication should be taken into consideration.

One of the essential issues relevant to linguopragmatic interpretation of Linguistic Personality in literary discourse is the notion of pragmatic intention. The study of LP in linguopragmatic approach puts forward the problem of pragmatic intention as one of the crucial means in the analyzing effectiveness of impact and perception of communication in the literary discourse. Pragmatic intention can be defined as “verbalized in the text the addresser's deliberate intention to exert impact on the addressee with the aim to cause some reconstruction in his/her world picture” [3;4-9].

Several types of pragmatic intention can be distinguished and the impact of each can vary in particular context. Language units assist to determine pragmatic intentions implicitly or explicitly in pragmatic analysis. Thus, the following types of PI are distinguished:

- “to attract attention” (attention-compelling intention);
- “to interest the reader”;
- “to exert an emotional impact”;
- “to activate knowledge structures” relevant to the conceptual information;
- “to stimulate the addressee's creativity”;
- “to represent the conceptual world picture” [4; 34-56.]

The pragmatic intention of emotional impact is realized by the whole system of stylistic devices used in the text. For example:



**Kókte** barar quslar dizbegi,  
 Bir qaptalda mashina júzer. («Seniń qollarıń»)  
 Túnde **kókten** juldızlar tógilip,  
 Tal shaqasına **ilinip qalǵanday**. («Bir gúl úzdim Shırshıq boyman»). [5; p 352.]

Eminent karakalpak poet Ibragim Yusupov took an advantage of stylistic devices such as metaphor, epithet, personification etc, in his works above with a view to exert an emotional impact. So, the dominant role belongs to a convergence of stylistic devices. The blue does not convey the meaning - colour, but it is in the sense of sky. Blue has been utilized as a symbol of the sky. Additionally, our people prayed to the God believing in his existence in the sky. In the following lines of his lyric, the author uses the stylistic device of personification stating the “sun is smiling”, “the field is calling the dehkan”, moreover, there is a usage of oxymoron: “day and night” which increases the readers interest.

**Ku`n ku`limlep**, hawa rayi jo`nlesip,  
**Diyxandi shaqirar** atiz kel desip,  
 Usi bu`gin **ku`n menen tu`n** ten`lesip,  
 Kewillerge ten`lik da`rwani keldi.

**Aq júzinde az-kem ájim** sızıǵı,  
**Aqjarqın, iybeli kózler** súzigi.. («Jaqsı hayallargá jas mingen sayın...»)

In these lines he poetically, successfully uses alliteration, paronyms, metonymy and creates a convergence of SDs to attract the readers’ attention.

Deautomatization can especially be observed on the surface layer of the text and characterized by various kinds of structural modifications, which serve to identify the pragmatic intention —to attract the readers’ attention. To these means we can refer different occasional modifications of words, phraseological units and syntactical structures. Therefore, the principal device to identify this pragmatic intention is an occasionalism built on deviations from the norms of the literary language. For instance: *I used to call her Hippo, because she was such a hypocrite and so fat* (Huxley, p.163)[5 pp.34-56.J.

It is common knowledge that the pragmatic aspect of language and communication is linked with a person’s attitude to linguistic signs, with the expression of his attitudes, assessments, emotions, intentions in the production (and perception) of speech actions in statements and discourses. Pragmatically, the structure of language is a system of behavior. [6;65]

The differences between the pragmatic approach to language units from the semantic one are presented by **J. Leach**. The semantic representation of a sentence is different from its pragmatic interpretation. Semantics obeys rules (it is grammatical); pragmatics follow certain principles (it is “rhetorical”). The grammar rules are conventional; the principles of pragmatics are unconventional: they are stimulated by the aims of communication. Pragmatics correlates the meaning of an utterance with its pragmatic (or illocutionary) purpose (“strength”); this relationship can be direct or indirect.

Moreover, the modality proves to be one of the most essential characteristics of the text, its inherent category. It should be highlighted that the most complete theoretical account of this category is found in many researches [7;138].

Stylistic devices play a ponderable role in defining pragmatic intentions. For instance, Antonomasia is considered to be one of the efficient tool of pragmatic intention “to activize knowledge structures” along with revealing the individual picture, discrete personality, specific characteristics of LP in literary discourse. On a last note concerning this type of pragmatic intention it would be reasonable to mention that besides antonomasia there are other language units that are capable of representing frames and activizing knowledge structures in the text. They are:

- key words ( e.g. *fashion* in the *Devil Wears Prada*);
- repetitions (e.g. repetitive use of “*she*” *The Lovely Lady*);
- metaphors (e.g. *devil, old witch* in *The Lovely Lady*);
- allusions (e.g. *Bacchante laugh* in *The Lovely Lady*);
- symbols (e.g. *Prada* as *fashion industry, Devil* as *Miranda Priestly and other people who work in the fashion industry* in the *Devil Wears Prada*);
- euphemisms (e.g. *mentally challenged* instead of “stupid”, *personal assistant* instead of “secretary”, *chubby* instead of “fat” in the *Devil Wears Prada*).

I. Yusupov in his poem “Steppe Dreams” appropriately used phraseological units as well as neologisms from Russian origin, inherent in the common language, neutral from the stylistic point of view: Qulaq aspadi- “did not listen”, tisi batpadi “was not able to do sth”, izine tu`sti-“Chased”, siymay xanama-“ had limitless happiness”

Sol sebepli olar *qulaq aspadi*,  
“Uzliy” *sinoptiktin prognozina*,  
Mag`an *tisi batpay* oylanip o`tken,  
*Sho`l ta`n`irisi* sirttan qazip qarishin,  
Olardi tum-tustan aldi qamaqqa,  
Qalin` tayg`alarda *tu`stim izine*,  
Iske asqan *sho`l armanin* ko`remen.

Additionally, the study of human factor in linguistics is considered to be as one of the essential groundwork for the emergence of pragmatic intention “to represent the conceptual world picture”. It can be explained by the fact that human factor in linguistics makes it inevitable to investigate the relationships between the conceptual and language world pictures, which play pivotal role in interpreting the peculiarities of LP and other factors in literary discourse. It should be highlighted that all language means can be utilized to represent world picture. Specifically, much more stress is given to some specific verbal expressions that denote key notions. Moreover, due to its highly emotive and evaluative features, adjectives and adverbs perfectly represent the author’s conceptual world picture.

To conclude, pragmalinguistic units are directly affected by language units and functional language areas. The pragmatics come into opposition with the information-gathering function. Pragmemas are always pragmatic information carriers. Thus, while distinguishing pragmemas in text analysis the researcher should deal with above-mentioned principles and attempt to be attentive to the purpose of the addresser, his or her attitude to linguistic signs. A complex pragmatic approach to the text by the researcher provides with the whole picture and prevents from any misunderstandings.

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**Аннотация:** В статье рассматривается роль лингвопрагматических подходов в анализе текста. Кроме того, мы пытаемся провести сравнения и сопоставительный анализ. В статье также подробно исследуется проблема прагматических намерений. Лингвопрагматический анализ основан на лексико-грамматическом и лингвостилистическом и является их логическим продолжением в плане лингвопрагматической интерпретации полученных данных.

**Ключевые слова:** Прагматика, прагмалингвистика, лингвопрагматика, прагматические намерения, адресат (автор, отправитель, спикер) и адресат, коммуникативная лингвистика, деавтоматизация, языковая личность, литературный дискурс.

## PSYCHOLOGICAL SCIENCES

### СОН – НЕОТЪЕМЛЕМАЯ ЧАСТЬ В ПСИХИКЕ ЧЕЛОВЕКА ВО ВРЕМЯ БОДРСТВОВАНИЯ.

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**Аннотация:** Здоровый ночной сон нам позволяет весь следующий день пребывать в состоянии физической и умственной бодрости. Тогда как недосып может привести к несчастным случаям и различным ошибочным действиям, представляющей угрозу для нашей жизни деятельности. В статье поменяется о важности сна для человеческого организма и психического состояния.

**Ключевые слова:** Сон, бодрствование, сомнология, онейрология, фрустация, релакс.

### SLEEP IS AN INTEGRAL PART OF THE HUMAN PSYCHE DURING WAKEFULNESS.

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**Abstract:** A healthy night's sleep allows us to stay in a state of physical and mental vigor all the next day. While lack of sleep can lead to accidents and various erroneous actions that pose a threat to our life activities. The article will discuss the importance of sleep for the human body and mental state.

**Key words:** Sleep, wakefulness, somnology, oneirology, frustation, relaxation.

Сон занимает треть человеческой жизни, питается глубинами нашего подсознания и питает наше воображение. С нами занимается две науки: онейрология и сомнология (в основном расстройством сна),не говоря уж о психоанализе, который во многом и возник из интерпретации сновидений. Между тем слов для обозначение этой инореальности очень мало [«Комментарий» N 29, выпуск 2017. Статья Миаила Энштейна, // «Словарик сна и сновидение детство как пробуждение»//стр:13]

Само человеческая жизнь состоит из двух эмоционально- психологического и физиологического функционального состояния , как : сна и бодрствования. В психологии в основном изучается разные поведенческие состояния , например: внимание, сознание и т.д особенности и индивидуальности определенного психического момента. Несмотря на это все ровно человек бодрствует и засыпает по плану физиологического времени организма.

Однако с точки зрения улучшения психической активности сон – чрезвычайно важный

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фактор, так как его депривация (от лат. Sensus – чувство и от лат. Deprivatio – патерия, лишение) приводит к раздражительности, сонливости, трудностям решения интерперсональных и профессиональных проблем. Выполнение сложных задач, который требует активного внимания, может и ухудшаться, но решение простых задач ухудшается. Психическое истощение гораздо чаще требует сна, чем физическая усталость, при которой адекватным «ответом» является отдых. Вместе с тем хорошо известно, что усталость значительно усиливается после целого дня фрустрации, нежели после такого же времени активной и успешной работы. Таким образом, соотношение времени чередования сна и бодрствования в значительной степени зависит от эмоционального состояния человека. Но какова бы не была функция сна и его необходимость, сон является приятным и релаксирующим феноменом для многих [Аведисова А.С // «Терапия расстройства сна: современные подходы к назначению гипнотиков», // 3-е изд.-М.:ООО «Медицинское информационное агентство», 2008-112с: ил стр 5-6].

Сон воспринимается как явление несколько обыденное, что здоровые люди редко задумываются над его природой и значением. Лишь когда сон расстраивается, он становится проблемой [Борбели А., Б.82// «Тайны сна»// Пер.с нем. В.М Ковальзона. –М.: знание, 1989-192с стр: 7]. Тем, не менее биоритмы организма усиливается во время сновидения и человеческое тело тратит в двое больше энергию, с связи восстановлением полного состояния для бодрствования.

Физиологические внутренние часы человека всегда контролирует моменты бодрствования и сна. Когда люди спят слишком мало, то начинают болеть. Недосыпание опасно для жизни, так как сон – это не просто покой полное состояние релакса, но и энергия для мозга, сила восстановления клеточных обновлений в ткани человеческого организма.

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**SCIENTIFIC IDEAS OF YOUNG  
SCIENTISTS**

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**POMYSŁY NAUKOWE MŁODYCH  
NAUKOWCÓW**

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**НАУЧНЫЕ ИДЕИ МОЛОДЫХ  
УЧЕНЫХ**

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