IMPLEMENTATION OF COMMUNICATIVE AND LINGUISTIC STRATEGIES IN PHARMACEUTICAL DISCOURSE

Aygul Z. Ibatova

Tyumen Industrial University, Russia azshar2017@mail.ru ID: http://orcid.org/0000-0003-0565-8533

Abstract

The article studies pharmaceutical discourse with a special object language as one of the types of medical discourse. The author analyzes the communicative, linguistic strategies: information and motivation, used in the text of **patient information leaflets**, and also shows the ways of their implementation, how it is possible to have effective communication between the patient and the doctor. The author focuses on the factors that impede speech interaction in order to provide medical care: no recommendation to a doctor or pharmacist; the presence of a huge number of special terms; lack of reference in their instructions to consumers.

Keywords: pharmaceutical discourse, leaflets, instructions, communication.

INTRODUCTION

In recent decades, linguists have paid much attention to the study of medical discourse in linguistic research, the language in connection with the professional, cognitive, scientific activities etc. One of the types of medical discourse is the pharmaceutical discourse, which is characterized by a special language-object, and is usually described in a metalanguage foreshortening. The terminology is the result of the cognitive activity of pharmaceutical business specialists to be used in communication between doctors, pharmacists and related professionals (Nosova, 2013).

There are some own communication strategies with its own linguistic characteristics in pharmaceutical discourse. There are some socio-cultural differences, as well as sociocultural influence in the features (Rudova, 2008) due to the instructions for drugs.

Nosova L.G. believes that the instruction for a drug is perceived by people as one of the forms of informing the population in order to prevent a number of diseases, reduce fear of them, as well as familiarize themselves with the achievements of medical science and practice in their treatment (Nosova, 2013).

We believe that there is a huge number of special terms in a patient information leaflets, special linguistic phenomena, etc. as one of the ways to represent the concept. It is the terms that express special concepts that are so incomprehensible to the population that can change in the course of existence. We are considering that the pharmaceutical discourse is a phenomenon of communication between people of different activities: a pharmacist, a doctor, and a patient's discourse. This type of discourse is just beginning to be explored in terms of knowledge and is defined by researchers as mixed communication (Burdina, 2013).

Communication between the patient and the pharmacist in the pharmaceutical discourse takes place at a distance, the patient is unable to ask a question, ask incomprehensible terms, cannot receive instructions from the pharmacist. Therefore, a misunderstanding in this matter can lead to selfmedication and harm the patient's health.

In connection with the above, we believe that it is necessary to analyze the communicative picture of patient information leaflets, as well as its linguistic and communicative techniques used in the texts of patient information leaflets. Various similar linguistic phenomena are aimed at solving applied medical problems (for the provision of medical and advisory assistance to various groups of the population) (Kositskaya, 2016).

The aim of the study was to study the special features of pharmaceutical discourse, terminology, special linguistic phenomena used in the studied form of discourse: in the texts of patient information leaflets.

LITERATURE REVIEW

The theoretical and methodological basis of the study was the theoretical provisions of linguists and scientists.

Karpenko S. defines discourse as "a special dynamic system of discursive descriptions of the subject (individual or collective), verbalized speech-thinking activity, understood as a set of process and result. When analyzing the discourse of identity as a process, discourse appears as verbalized (here and now) speech-thinking activity, when viewed from the point of view of the result - as a set of texts generated in the process of communication. The text as a phenomenon at the center of the communicative act, closely related to extralinguistic reality (including cognitive phenomena) and amenable to direct linguistic analysis, is considered as the implementation of the discourse of identity" (Karpenko, 2015).

Sayakhova D.K. considered the concept of a linguistic personality in the aspects of a discursive activities. The author analyzed modern classifications of types of linguistic personality, and confirms the thesis that any linguistic personality is realized, first of all, in the process of communication, in the creation of speech works, in textual activity. It is concluded that the features of the linguistic personality are manifested in the totality of the texts (discourses) produced by it (Sayakhova, 2015).

Burdina O.B., & Mishlanova S.L. studied the institutional features of pharmaceutical discourse and their reflection in terminology (Burdina & Mishlanova, 2013).

Maslova I.B. & Korzhavykh E.A. presented an overview of terminological studies of Russian and foreign authors in the field of pharmacy, where they analyzed modern problems of

Implementation Of Communicative And Linguistic Strategies In Pharmaceutical Discourse

pharmaceutical terminology and important trends in its development (Maslova & Korzhavykh, 2011).

Burov G. P. talks about the problem of pharmacy as the richest layer of culture, which is just beginning to be developed in the domestic linguistic science and linguodidactics (Burova, 2009).

Akaeva, E.V. in her work "Functions of German-language instructions for the use of drugs" analyzed the main communicative-pragmatic functions patient information leaflets: descriptive, prescriptive, informative, regulatory. The author has provided markers representing accounting factors such as gender, age professional differences of polyadressees of this type of texts (Akaeva, 2019).

Matyunenko Yu.A. examined the etymology of pharmaceutical vocabulary in English and Russian, including the names of pharmaceutical specialties, names of medicinal plants, names of medicinal products, analyzed the historical aspects of the emergence and functioning of pharmaceutical vocabulary and came to the conclusion that many pharmaceutical terms have Greek-Latin roots in both languages and are international (Matyunenko, 2019).

Lazareva M.N. focuses the attention of researchers on the specifics of abbreviations functioning in Russian-language texts on pharmacy, highlighted the typological features of pharmaceutical abbreviations and considered ways of transferring foreign-language abbreviations in Russian-language texts of various genres of pharmaceutical discourse (Lazareva, 2016).

Gromova, A.V. examines pharmaceutical texts from the point of view of syntactic structure and notes their difference in the content aspect, the presence of constructive complexity. In order to understand and translate a scientific text correctly, you need to know the subject and the English terminology associated with it. The author focuses on the generalized abstract nature of the studied speech, which determines the use of certain types of syntactic structures (Gromova, 2018). Foreign authors also devote their works to the study of this topic.

Malangwa P. S. studied terminological problems and their impact on the translation of specialized texts: an analysis of pharmaceutical translations from English to Swahili. The author has dealt with issues related to lack of equivalents due to differences between the source and target languages. The author's attempts to establish these equivalents had a negative impact on the content and meaning of the article. The researcher based on a documentary review and analyzed qualitatively and proved that the established equivalents of specialized terms led to various translation problems, such as omissions, distortions (Malangwa, 2016).

Chitac M. & Maria, A. also focus on the problem of correct translation of medicinal instructions (Chitac & Maria, 2019). The results of the author's research showed there were clear links between situational, linguistic and functional characteristics of the four studied pharmaceutical registers and showed that there were the patterns of language using differ significantly in thematic and functional differences between the types of text, despite the fact that they deal with a similar topic, his research could have important pedagogical implications, especially in relation to teaching ESP students and medical practitioners (Grabowski, 2015).

We, following G.P. Burova, consider written instructions for the use of medicinal products as a genre of written pharmaceutical discourse, which describes information on the composition, pharmacological properties, storage and dispensing of medicinal products, on the one hand, and on the other hand, the text includes: recommendations for the use of medicinal products, side effects that are of a medical nature.

RESULTS

According to research by L.N. there are the following strategies of the studied discourse: information and motivation, persuasion.

Consider the communication strategy used in the patient information leaflets for Ferrum Lek and Combilipen tabs. Let us consider how these strategies are implemented within the framework of the pharmaceutical discourse in the instructions for the drug.

As we can see from the patient information leaflets, manufacturers use only paragraph articulation as an information strategy and do not use such tactics as argumentation, appeal to authority, etc. But we believe that paragraphs are not clearly highlighted in these instructions, which complicates the perception of the text, paragraphs are not highlighted, only their tables of contents are underlined.

In the above patient information leaflet, the incentive strategy is implemented through the use of linguistic means such as the modal verbs *can*, *should*, impersonal sentences and the imperative mood.

There are manual traces of the tactics of advice, containing some shades of motivation:

It should not be used during lactation; it should not be used in this category of patients and etc.

This tactic of advice is used between clients who rely on inaccurate information in this case.

Such ones contain not only a list of necessary actions, a description of the implementation features, for example, a description of the use of a medicine.

The initial dose is on average 200 mcg orally 1 time / day. The maximum single dose is 400 mcg. An individual correction of the daily dose is required depending on the tolerance of therapy. The maximum daily dose is 600 mcg in 2 divided doses.

For patients with moderate and severe renal insufficiency, as well as those on hemodialysis, the initial dose is $200 \,\mu\text{g}$ / day. If necessary and with good tolerance, the daily dose can be increased to a maximum of $400 \,\text{mcg}$.

In Russian-language patient information leaflets, the tactics of advice or recommendations, warnings about the consequences in writing are often implemented with the help of impersonal sentences.

From the side of the central nervous system: often - headache, dizziness (vertigo), drowsiness; infrequently - fainting

From the side of the cardiovascular system: infrequently - a marked decrease in blood pressure, orthostatic hypotension, bradycardia.

This tactic excludes the addressee from the dialogue, allows you to address the patient in the form of an order, an urgent recommendation.

One of the features of patient information leaflets is the predominance of infinitive structures expressing the prohibition: *The drug is to be contraindicated for use during pregnancy.*

In Russian-language texts, infinitive constructions are used with the replacement of the infinitive by a verbal noun: *When leukopenia occurs, therapy is suspended.*

Such linguistic phenomena are aimed at warning the consumer about caution when choosing a medicine and its

In medicinal instructions, information blocks are used, which are entered using headers: special instructions, storage conditions, overdose, etc. Such proposals are impersonal: While using the drug, it is recommended to control the cellular composition of the blood. When used together with albendazole, dexamethasone and cimetidine increase the concentration of albendazole sulfoxide in the blood.

Implementation Of Communicative And Linguistic Strategies In Pharmaceutical Discourse

It should be noted that there is a referring to a doctor rather than to a patient, since there are special terms.

On the basis of the research material collected by us, it is impossible to trace the tactics of giving prestige and scientific character. In the examples of the above patient information leaflets, authoritative sources are not indicated; below, to implement this tactic, the method of appeal to an authoritative source is used.

Analyzing the Russian-language patient information leaflets, it is necessary to note some inaccuracies in the shortcomings:

- lack of an accurate description, recommendations to a doctor or pharmacist in case of any questions or unwanted symptoms;
- the presence of a huge number of special terms, the fact that not all communication participants are required to be specialists is not taken into account.
- the lack of appeal in their instructions to consumers with a request to report side or undesirable effects or to the address of the manufacturer.

CONCLUSION

So, based on the materials we have collected, we have established two main strategies and tactics of pharmaceutical discourse, analyzed their implementation, and provided examples.

Therefore, the main direction for further research in this area is the development of a certain individualization of patient information leaflets texts, an approach to the client due to a more trusting mediated dialogue, the choice of linguistic forms of presenting information, which should contribute to confirming the availability and reliability of information, establishing feedback, and therefore, and improving the quality of goods and increasing responsibility for the services provided.

In addition, for the prospect of further research, we propose to study the issue related to identifying the real language difficulty of the texts of patient information leaflets texts of different types using an integral assessment, establishing their objective assessment of the difficulty of various genres of texts with the aim of their subsequent improvement. The integral score is calculated using the coefficient of readability of the text. In modern domestic and foreign formulas for readability, exclusively quantitative parameters of the text are used. It is in this that their limitations are seen. Quantitative parameters largely reflect the qualitative parameters of the text as, a word consisting of fewer syllables is less informative. Since the presence of prefixes, suffixes, endings increase additional meanings, therefore, the information content of the word increases. Therefore, it is advisable to identify the percentage of words in the text, the number of "long" words (words with three or more syllables) in the text, etc. By the number of words in a sentence, one can judge the number of connections between words, fragments of a sentence. Many scientists were engaged in the study of this problem, but within the framework of academic texts, advertisment booklets. Scientists talk about the need to take into account simple and complex (composed, subordinate and non-union) sentences in the text as a parameter of the syntactic complexity of the text, the need to take into account a number of quantitative parameters: the average size of a whole sentence; the average size of a simple stand-alone proposal; the average size; the average size of a simple sentence in a complex one and others, where the average sentence size is "the number of words and syntactically significant components". Obviously, the characteristics of the text cannot be determined without taking into account its 'qualitative' parameters with all the significance of the quantitative parameters, and none of the existing formulas of readability is currently capable of analyzing 'qualitative' parameters of the text, primarily semantic and pragmatic ones. In this regard, the criteria for the selection and adaptation of the text of patient information leaflets texts will be determined in a comprehensive manner. Taking into account the results of the automated analysis of the text of patient information leaflets, it is necessary to consider the presence of footnotes, comments, etc. in the text. In addition, when compiling the texts of medicinal instructions, one should take into account the entire set of criteria traditionally proposed by domestic science. Criteria such as the complexity and readability of the text can be determined using the Coh-Metrix program and the Flash and Flash-Kincaid readability index, which makes text analysis more objective and convenient.

REFERENCES:

- 1. Akaeva, E. V. (2019). Functions of German-language instructions for use of medicinal products. Man and the Universe, (1), 4-8.
- 2. Burdina, O.B. (2013). Modeling terminological variability in pharmaceutical discourse. Abstract of thesis Ph.D. in Philology. n. Perm: Publishing house "Perm. state nat. research un, 2013, 20.
- 3. Burdina, O.B., & Mishlanova, S.L. (2013). Institutional features of pharmaceutical discourse and their reflection in terminology. Historical and socio-educational thought, (4).
- 4. Burova, G.P. (2009). Basic concepts of Russian pharmaceutical discourse. Russian language abroad, (5), 11-11
- Chitac, M., & Maria, A. (2019). Translating Pharmaceutical Texts for Non-Specialist Readers. EIRP Proceedings, 14 (1).
- Grabowski, Ł. (2015). Keywords and lexical bundles within English pharmaceutical discourse: A corpusdriven description. English for Specific Purposes, 38, 23-22
- 7. Gromova, A. V. (2018). FEATURE OF SYNTAXIC CONSTRUCTIONS OF SCIENTIFIC LITERATURE (by the example of translation of pharmaceutical texts). Bulletin of Tver State University. Series: Philology, (4), 227-232.
- 8. KARPENKO, S. (2015). DISCOURSE OF POWER AND DISCOURSE OF THE IAS IN MODERN PHILOSOPHICAL ANTHROPOLOGY: A CULTURAL, BIOLOGICAL AND RELIGIOUS DIMENSION. Anthropological Vimir of Philosophical Doslings, (8), 19-28.
- 9. Kositskaya, F.L. (2016). French pharmaceutical discourse and its genre palette. Bulletin of the Tomsk State Pedagogical University, (10 (175)).
- 10. Lazareva, M.N. (2016). TYPOLOGICAL FEATURES OF PHARMACEUTICAL ABBREVIATIONS AND METHODS OF THEIR TRANSFER IN SCIENTIFIC TEXTS IN RUSSIAN. Translation Industry, 1, 85-91.
- 11. Malangwa, P. S. (2016). Terminological Challenges and their Impact on the Translation of Specialized Texts: An Analysis of Pharmaceutical Translations from English into Kiswahili. Kioo cha Lugha, 16 (1).
- Maslova, I.B., & Korzhavykh, E.A. (2011).
 Terminological studies of pharmaceutical discourse: a linguodidactic review. Multilingualism and Transcultural Practices, (1).
- 13. Matyunenko, Yu.A. (2019). Positioning of the Sverdlovsk Region: from an industrial region to an agglomeration of the future. Business. Society. Power, (3), 13-31.

Implementation Of Communicative And Linguistic Strategies In Pharmaceutical Discourse

- 14. Nosova, L.N. (2013). Communicative and pragmatic potential of instructions for the use of drugs in pharmaceutical discourse. M.-2013.
- 15. Rudova Yu.V. Booklet as a genre of written medical discourse // Bulletin of the Volgograd State University. Series 2: Linguistics. 2008. No. 1. P. 110-115.
- 16. Sayakhova, D.K. (2015). DISCOURSE AND CONCEPT OF LANGUAGE PERSONALITY. Modern trends in the development of science and technology, 49.

Figures:

ИНСТРУКЦИЯ ПО МЕДИЦИНСКОМУ ПРИМЕНЕНИЮ ЛЕКАРСТВЕННОГО ПРЕПАРАТА

Феррум Лек®

Регистрационный номер: П N012698/01 Торговое название препарата: Феррум Лек®.

Международное непатентованное наименование: железа (III) гидроксид полимальтозат.

Лекарственная форма: таблетки жевательные

Состав

1 таблетка жевательная содержит:

Активное вещество: железа (III) гидроксид полимальтозат 400 мг, в пересчете на железо - 100 мг. Вспомогательные вещества: макрогол 6000 – 37,0 мг; аспартам – 1,5 мг; ароматизатор шоколадный – 0,6 мг; тальк - 21,0 мг; декстраты - до получения 730,0 мг.

Круглые плоские таблетки темно-коричневого цвета с вкраплениями светло-коричневого цвета, с фаской.

Фармакотерапевтическая группа: железа препарат.

Код АТХ: В03АВ05

Фармакологические свойства

Фармакодинамика

В железа(III) гидроксид полимальтозате многоядерный гидроксид железа(III) снаружи окружен множеством ковалентно связанных молекул полимальтозата, что даёт общую среднюю молекулярную массу приблизительно 50 кДа. Структура многоядерного ядра железа(III) гидроксид полимальтозата сходна со структурой ядра белка ферритина – физиологического депо железа. Железа(III) гидроксид полимальтозат стабилен и в физиологических условиях не выделяет большого количества ионов железа. Из-за размера степень диффузии железа(III) гидроксид полимальтозата через слизистую оболочку приблизительно в 40 раз меньше по сравнению с комплексом шестиводного железа(II). Железо из железа(III) гидроксид полимальтозата активно всасывается в кишечнике. Эффективность железа(III) гидроксид полимальтозата для нормализации содержания гемоглобина и восполнения депо железа была продемонстрирована в многочисленных рандомизированных контролируемых клинических исследованиях с использованием плацебо-контроля или активного препарата сравнения, проведенных у взрослых и детей с различным статусом депо железа.

Фармакокинетика

Всасывание

Железо из железа(III) гидроксид полимальтозата всасывается в соответствии с контролируемым механизмом. Повышение содержания сывороточного железа после применения препарата не коррелирует с общим всасыванием железа, измеренным как встраивание в гемоглобин (Hb). Исследования с меченым радиоизотопом железа(III) гидроксид полимальтозатом выявили сильную корреляцию между включением железа в эритроциты и содержанием железа во всем организме. Максимальная активность всасывания железа из железа(III) гидроксид полимальтозата отмечается в двенадцатиперстной и тонкой кишке. Как и в случае с другими пероральными препаратами железа, относительное всасывание железа из железа(III) гидроксид полимальтозата, определенное как встраивание в гемоглобин, снижается с повышением доз железа. Кроме того, наблюдалась корреляция между степенью выраженности дефицита железа (в частности, концентрацией ферритина в сыворотке крови) и относительным количеством всосавшегося железа (то есть, чем больше выражен дефицит железа, тем лучше относительное всасывание). У пациентов с анемией всасывание железа из железа(III) гидроксид полимальтозата в отличие от солей железа увеличивалось в присутствии пищи. Распределение

Распределение железа из железа(III) гидроксид полимальтозата после всасывания было изучено в исследовании с использованием техники двойных изотопов (55Fe и 59Fe). Биотрансформация

Всосавшееся железо связывается с трансферрином и используется для синтеза гемоглобина в костном мозге или хранится, главным образом в печени, где связывается с ферритином.

Невсосавшееся железо выводится кишечником (с калом).

Показания к применению

- лечение латентного дефицита железа (дефицит железа без анемии);
- лечение клинически выраженной железодефицитной анемии;
- повышенная потребность в железе во время беременности и в период грудного вскармливания, донорства крови, интенсивного роста, вегетарианства и пожилого возраста.

Противопоказания

- установленная гиперчувствительность к железа(III) гидроксид полимальтозату или к любому вспомогательному

- установленная типертубения
 веществу;
 перегрузка железом (например, гемосидероз, гемохроматоз);
 нарушение утилизации железа (например, свинцовая анемия, сидероахрестическая анемия, талассемия);
 анемия, не связанная с дефицитом железа (например, гемолитическая анемия или мегалобластная анемия, вызванная недостатком витамина В₁₂);
 детский возраст до 12 лет (в связи с необходимостью назначения малых доз в этой возрастной группе рекомендуется использовать препарат Феррум Лек[®], сироп 10мг/мл);
 Беременность
 веременность
 веременность

До настоящего времени не поступало сообщений о серьезных нежелательных реакциях после приема железа(III)





Implementation Of Communicative And Linguistic Strategies In Pharmaceutical Discourse

Drug interactions

The combined use of moxonidine with other antihypertensive drugs leads to an additive effect.

Tricyclic antidepressants *can* reduce the effectiveness of centrally acting antihypertensive drugs, so they are not recommended in conjunction with moxonidine.

Moxonidine can enhance the action of tricyclic antidepressants, tranquilizers, ethanol, sedatives and hypnotics.

Moxonidine is able to moderately improve impaired cognitive function in patients receiving lorazepam.

Moxonidine can enhance the sedative effect of benzodiazepine derivatives when administered simultaneously.

Moxonidine is secreted by tubular secretion. Therefore, its interaction with other drugs released by tubular secretion is not excluded. special instructions

Special care *must* be taken when using moxonidine in patients with grade I AV block (risk of bradycardia); severe coronary artery disease and unstable angina pectoris (experience of use is insufficient); renal failure.

If it is necessary to cancel simultaneously taken beta-blockers and moxonidine, first cancel beta-blockers and only after a few days - moxonidine.

There is currently no evidence that discontinuation of moxonidine leads to an increase in blood pressure. However, it is not recommended to abruptly stop taking moxonidine, the dose should be reduced gradually over 2 weeks.

Influence on the ability to drive vehicles and use mechanisms

During the period of treatment, patients *should* be careful if it is necessary to engage in potentially hazardous activities that require concentration of attention and high speed of psychomotor reactions.

Pregnancy and lactation

There have been no adequate and well-controlled studies of the safety of moxonidine during pregnancy, so it *should* not be used in this category of patients.

It should not be used during lactation, since moxonidine is excreted in breast milk. If it is necessary to use moxonidine during lactation, breastfeeding should be discontinued.

Figure 2. An example of the implementation of an incentive strategy.