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ЖЕРГІЛІКТІ ТАРАЛМАЛЫ СҮТ БЕЗІ РАГЫМЕН АУЫРАТЫН НАУҚАСТАРҒА ФОТОДИНАМИКАЛЫҚ ТЕРАПИЯ ЖҮРГІЗУ МҮМКІНДІКТЕРІ

Мақала клиникалық практикада фотодинамикалық терапияны қолданудың перспективалы мүмкіндіктеріне арналған. Бұл әдістің артықшылығы ісік ошақтарына әсер ету бағыты және төмен жүйелі уыттылық кезінде жоғары тиімділік болып табылады. Сүт безі обырының жергілікті таралған және асқынған сатыларында кешенді емдеуде фотодинамикалық терапияны қолдану осы топтағы емделушілерде емдеудің тиімділігін, сапасын және ұзақтығын жақсартуы мүмкін.
Кілт сөздер: сүт безі обыры, фотодинамикалық терапия, тері ішілік метастазалар, жергілікті таралған метастазалар.

Summary
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POSSIBILITIES OF APPLICATION OF PHOTODYNAMIC THERAPY IN PATIENTS WITH LOCALLY DISTRIBUTED BREAST CANCER

The article is devoted to the perspective possibilities of photodynamic therapy application in clinical practice. The advantage of this method is the focus of the impact on tumor foci and high efficiency in low-system toxicity. The use of photodynamic therapy in complex treatment of locally advanced and advanced stages of breast cancer can improve the effectiveness of treatment, quality and duration in patients of this group.
Key words: breast Cancer, photodynamic therapy, intradermal metastases , locally advanced metastases.

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THE EXPERIENCE OF THE MRI USING IN THE DIAGNOSTICS OF TUMOR DISEASES OF THE PROSTATE

Abstract
Nowadays incidence rates of prostate cancer are progressively increasing, but modern methods of diagnosis and treatment give doctors the opportunity to effectively resist the onslaught of this pathology. Nevertheless, modern medicine still needs, even more reliable and informative methods for diagnosing early forms of prostate cancer.
The article cites our experience with MRI for prostate cancer. A comparative analysis of MRI indicators in groups of patients with prostate cancer and BPH, as well as a comparison of the MRI method with other methods recommended for the diagnosis of prostate cancer.
Key words: magnetic resonance imaging, prostate cancer, diagnostic algorithm

Prostate cancer (PC) is the most common solid tumor in Europe, with an incidence rate of 214 cases per 100,000 men. It exceeds the incidence of lung and colorectal cancer. Prostate cancer ranks the second place among the causes of death from malignant neoplasms in men [1,2,3].The change in the incidence rate in 2013 increased by 4.6% compared to 2012, according to the Bulletin of the National Chancellery of the Register of Ukraine. The average incidence rate was 21.1 per 100,000 population in the Odessa region in 2013 [4].

The method of magnetic resonance imaging (MRI) is not used in routine control of asymptomatic patients according to the recommendations of the European Association of Urologists and the data of the Clinical Recommendations on Cancer Diseases of the Society of Oncology of Ukraine [5]. It can be performed selectively in the development process after receiving data on progression of the disease or biochemical progression before deciding on the choice of treatment methods.

AIM: To assess the appropriateness of using this method in this category of patients, based on the study of our experience with the use of MRI in the diagnosis of prostate tumor diseases.

Materials and methods: A retrospective analysis of 91 men was conducted in the urological departments of clinical hospital № 10 from 2010 to 2015 in order to determine the role of MRI in the diagnosis of PC. All patients had a comprehensive prostate cancer examination using the MRI method.

Three groups of patients were created according to the results of the comprehensive examination. First group, were patients with benign prostatic hyperplasia (BPH) (n = 39), middle age of which - (65,9 ± 6,9) years; 2nd group, were patients with localized prostate cancer (n = 33), middle age of which - (68,2 ± 6,7) years,; 3rd group, were patients with locally advanced prostate cancer (n = 19), middle age of which - (66.3 ± 6.2) years.

The ultrasound was also performed using the Resistance Index, which is an additional ultrasound-Doppler study to evaluate neoangiogenesis.

The statistical analysis of the diagnostic results included the assessment of the sensitivity, specificity, accuracy, predictive value of the positive result (PVPR) and the prognostic value of the negative result (PVNR) of the used methods of investigation [6].

The comprehensive study included the determination of the level of prostate specific antigen (PSA), digital rectal examination (DRE), and transrectal ultrasound examination of the prostate gland (TREPG) performed according to standard techniques.

Results of the research and their discussion:

A prostate cancer was verified in 52 patients according to the results of a complex examination carried out by patients. The average age was (67.5 ± 6.5) years. The first stage cancer was detected in 4 (7.7%) patients. The second stage was detected in 29 (55.8%) patients. The third and fourth stage were detected in 10 (19.2%) and 9 (17.3%) men.

Most patients complained about strangulation, nocturia and dysuria. A less number of patients (12.2%) were hospitalized due to an increase in PSA. The level of residual urine did not exceed the norm according to ultrasound data in 17 (43,6%) patients in the 1st group, 14 (42,4 с%) patients in the 2nd and 3rd (15,8%) patients in the 3rd group. The presence of residual urine was recorded in 11 (28.2%), 11 (33.3%) and 9 (47.4%) patients. The 5 (12.8%), 6 (18, 2%) and 7 (36.8%) patients in 1st, 2nd and 3rd groups were in the state of acute urinary retention. The average volume of prostate for patients in the first group was 80.3 cm3, 61.8 cm3 for second group and 72.7 cm3 for the third group.

The signs of prostate cancer, were detected in 17 (43.6%) patients in the 1st group, 27 (81.8%) patients in the 2nd and 18 (94.7%) patients in the 3rd group according to the data of the digital rectal examination. Such a high percentage of false-positive results obtained during the DRE was due to the presence of chronic inflammation in the patients of this age with the formation of calcinates in the prostate tissue, which is palpatory different from the changes characteristic to prostate cancer.

The presence of oncologic process in prostate tissue during the study of transrectal ultrasound was determined in 21 (53.8%) patients in the first group, 23 (69.7%) patients in the second group and 13 (68.4%) patients in the third group. The presence of false-positive results in patients of the first group and false-negative results in patients of the second and third groups was due to the complexity of differential diagnosis between the ultrasound pattern of changes in prostate tissue in state of chronic inflammation and malignant neoplasm. The method of determining the resistance index partially helps to distinguish between these two states by assessing blood circulation in the investigated areas.
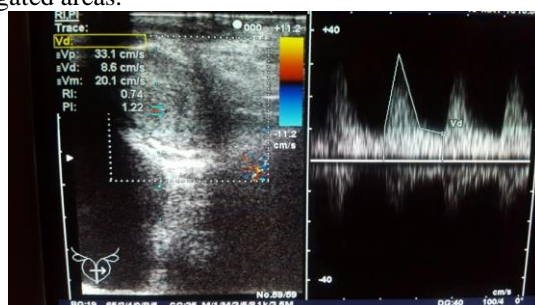

Figure 1 - **Sonogram of the prostate gland (transrectal ultrasound examination with determination of resistance index).**

The increase in the level of PSA was determined in 24 (61.5%) patients in the 1st group, 30 (90.9%) patients in 2nd and 18 (94.7%) patients in the 3rd group. The increased PSA densities were defined less frequently and comprised 11 (28,2%), 21 (63.6%) and 16 (84.2%) patients in groups 1, 2 and 3.

Table 1 - **Detection (investigation) of the results characteristic for prostate cancer according to the used methods in the groups of patients**

Group Investigation methods	Igroup	IIgroup	IIIgroup
DRE	17 (43,6 %)	27 (81,8 %)	18 (94,7 %)
TRUS	21 (53,8 %)	23 (69,7 %)	13 (68,4 %)
PSA	24 (61,5 %)	30 (90,9 %)	18 (94,7 %)

Such high rates (values) of malignant neoplasm signs of the prostate observed in this study exclusively due to the retrospective analysis of the disease history in patients with performed MRI of the pelvic organs. This type of research used for the purpose of differential diagnosis in cases where there was no correlation between the clinical picture and some of the results of screening research methods (most often the level of PSA determination).

The signs of the prostate adenocarcinoma on the MRI were the low intensity of the signal on T2 images against the backdrop of a high-intensity signal, irregular shape, diffuse mass-effect distribution, fuzzy and uneven prostate contours.

The cells of the cancer were rapidly accumulated the contrast during dynamically contrasting in the arterial phase and quickly removed it.

Figure 2 - **Tomogram of the pelvic organs**.

The above-mentioned MRI signs were detected in 14 (35.9%) patients with BPH, which is explained by the possibility of the presence of chronic inflammation cells, fibrous cicatricial changes in these fragments of the gland. However, prostate cancer was diagnosed in patients whose prostate cancer diagnosis was confirmed by prostate biopsy. There were 32 (96.9%) patients in the second group and 19 (100%) patients in the third group.

The results of biopsy verified atypical hyperplasia and prostatic intraepithelial neoplasia in 10 (25.6%) patients of the first group, 11 patients (33.3%) of the second and 3 patients (15.8%) of the third group. The presence of PIN in patients of the first group explained by false positive results from studies obtained during a comprehensive survey.

The statistically probable correlation between the presence of MRI-signs of prostate cancer and the degree of tumors differentiation by Gleason score was not detected in performing statistical data processing.
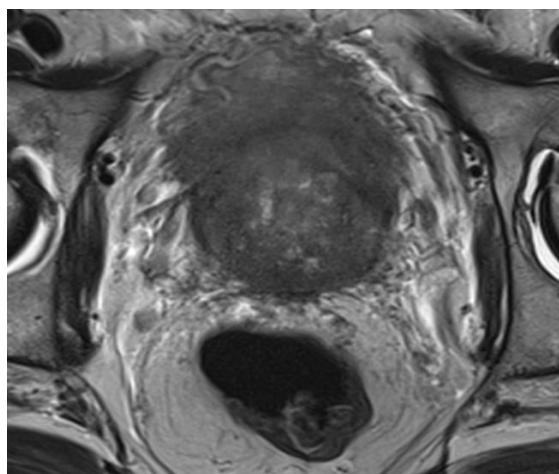
Fig.ure 3 - **Tumor of the pelvic organs**

The research of basic and auxiliary indicators of informativeness, consisted of: sensitivity - 98,1%; specificity - 64,1%; accuracy - 83.5%, prognostic value of positive result - 78.5%, and indicator of predictive value of negative result - 96.2% was conducted to determine the role of MRI in the diagnosis of prostate cancer.
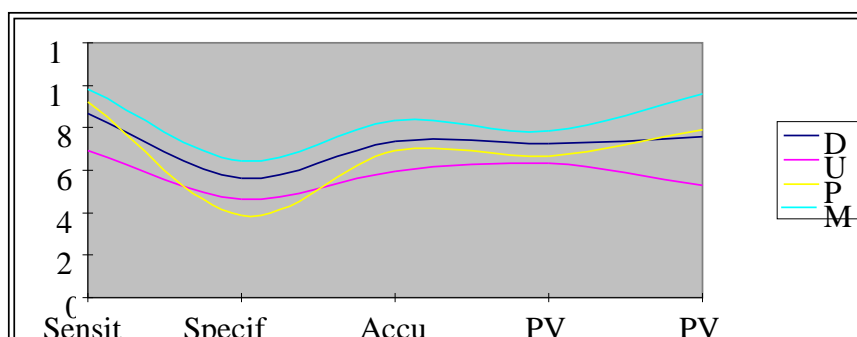

Figure 4 - **Comparison of diagnostic methods for prostate cancer**

The digital rectal examination, sensitivity, specificity, accuracy, PVPR and PVNR were 86.5%, 56.4%, 73.6%, 72.6% and 75.9%. The transrectal ultrasound indices were 69.2%, 46.2%, 59.3%, 63.2% and 52.9%. The indicators of the level of prostate specific antigen were 92.3%, 38.5%, 69.2% , 66.7% and 78.9% respectively.

Conclusions:

Magnetic resonance imaging is the main method of choice for patients with localized and locally advanced prostate cancer in order to detect the severity of the process, evaluate the possibility of using the surgical treatment tactics and the feasibility of using radiotherapy.

The MRI method has high reliability in the complex examination of the patient. The priority direction in its use is the exclusion of the oncological process in the prostate.

Magnetic resonance imaging is a fairly modern and informative method investigation of prostate.

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ПРОСТАТЫНЫҢ ІСІК АУРУЛАРЫНЫҢ ДИАГНОСТИКАСЫНДАҒЫ МРТ ПАЙДАЛАНУ ТӘЖІРИБЕСІ

Бүгінгі күні простата қатерлі ісігінің көрсеткіштері бірте-бірте артып келеді, бірақ диагностикалау мен емдеудің заманауи әдістері дәрігерлерге осы патологияның шабуылына тиімді қарсы тұруға мүмкіндік береді. Дегенмен, біздің ойымызша, қазіргі заманғы медицина бұрынғыдай простата қатерлі ісігінің ерте нысандарын диагностикалаудың сенімді әрі ақпараттандыратын әдістеріне қажет.

Мақалада протеин қатерлі ісігі үшін МРТ тәжірибеміз туралы айтылған. Простата қатерлі ісігі бар және БЖЖ бар науқастарда МРТ көрсеткіштерін салыстырмалы талдау, сондай-ақ простата қатерлі ісігін диагностикалауға ұсынылған басқа әдістермен МРТ әдісін салыстыру.

Кілт сөздер: магнитті резонанстық көрініс, простата обыры, диагностикалық алгоритм

Резюме
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НАШ ОПЫТ ИСПОЛЬЗОВАНИЯ МРТ В ДИАГНОСТИКЕ ОПУХОЛЕВЫХ ЗАБОЛЕВАНИЙ ПРЕДСТАТЕЛЬНОЙ ЖЕЛЕЗЫ

Сегодняшние показатели заболеваемости РПЖ прогрессивно увеличиваются, однако современные методы диагностики и лечения дают врачам возможность эффективного противостоять натиску данной патологии. Тем не менее современная медицина все еще нуждается, на наш взгляд, в еще более достоверных и ниформативных методов диагностики ранних форм РПЖ.

В статье приведен наш опыт применения МРТ при РПЖ. Проведен сравнительный анализ показателей МРТ в группах больных с РПЖ и ДГПЖ, а также сравнение метода МРТ с другими методами, рекомендованными для диагностики РПЖ.

Ключевые слова: магнитно-резонансная томография, рак предстательной железы, алгоритм диагностики

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ЛЕЧЕНИЕ МЕСТНО-РАСПРОСТРАНЕННОГО И РЕЦИДИВИРУЮЩЕГО БАЗАЛЬНО-КЛЕТОЧНОГО РАКА КОЖИ С ИСПОЛЬЗОВАНИЕМ ФОТОДИНАМИЧЕСКОЙ ТЕРАПИИ

Резюме
Результаты клинических исследований последних лет, демонстрируют преимущества ФДТ посравнению с другими методами лечения БКРК:селективность воздействия на опухолевую ткань, возможность многократного проведения процедурыв случаях большого размера опухоли, при мультифокальном опухолевом процессе, трудно доступных локализациях без увеличения риска осложнений с хорошимфункциональным и косметическим эффектом.В работепредставлены собственные результаты использования фотодинамической терапии в лечении местно-распространенного и рецидивирующего базально – клеточного рака кожи. Полученные данные,подтверждают эффективность, безопасность и хорошую переносимость метода фотодинамической терапии у данной категории пациентов.