ПРЕДСЪРДНО МЪЖДЕНЕ ПРИ ПАЦИЕНТИ С НЕОПЛАСТИЧНИ ЗАБОЛЯВАНИЯ

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РЕЗЮМЕ
Сърдечните аритмии са чест проблем при пациентите с карцином, могат да повлияят качеството на живот и да усложнят лечението на неопластичното заболевание. Скорости проучвания показват, че новопоявилото се предсърдно мъждене (ПМ) е значим рисков фактор за последваща диагноза на карцином. ПМ се среща по-често при пациенти с малигни заболявания, особено при тези, които са подложени на операция. Нашите данни показват, че 6% от пациентите, хоспитализирани при повод пристъпно или персистиращо ПМ, са с карцином. ПМ при пациентите с неопластични заболявания може да бъде придружаващо заболяване, последица от основното заболяване или усложнение на терапията. Карциномът е протромботично състояние, не е включен в скалите за оценка на риска и някои от химиотерапевтичните действа протромботично. В същото време някои от малигните заболявания са свързани с повишен риск от хеморагия. Няма специфични препоръки за лечение на ПМ при карциномно болни. Сърдечните аритмии са чест проблем при пациентите с карцином, особено при тези, които са подложени на операция. Нашите данни показват, че 6% от пациентите, хоспитализирани при повод пристъпно или персистиращо ПМ, са с карцином. ПМ при пациентите с неопластични заболявания може да бъде придружаващо заболяване, последица от основното заболяване или усложнение на терапията. Карциномът е протромботично състояние, не е включен в скалите за оценка на риска и някои от химиотерапевтичните действа протромботично. В същото време някои от малигните заболявания са свързани с повишен риск от хеморагия. Няма специфични препоръки за лечение на ПМ при карциномно болни. Сърдечните аритмии са чест проблем при пациентите с карцином, особено при тези, които са подложени на операция. Нашите данни показват, че 6% от пациентите, хоспитализирани при повод пристъпно или персистиращо ПМ, са с карцином.

Ключови думи: предсърдно мъждене, карцином

АТРИАЛНО МЪЖДЕНЕ НА ПАЦИЕНТИ С КАРЦИНОМ

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ABSTRACT
Cardiac arrhythmias are a common problem facing cancer patients and, when present, can affect quality of life and complicate the treatment of their malignancies. Recent study shows that new-onset atrial fibrillation (AF) is a significant risk factor for the subsequent diagnosis of incident cancer. AF has been found to occur with an increased frequency in patients with malignancies, particularly in those undergoing cancer surgery. Our data shows that 6% of the patients, hospitalized for paroxysmal or persistent AF are with cancer. AF in a cancer patient may be a comorbidity, may be a consequence of the cancer or a complication of cancer therapy. Cancer is a prothrombotic state, it is not incorporated in the risk prediction scores and some anticancer agents act prothrombotic. At the same time some malignancies are associated with increased risk of hemorrhagia. There are no specific guidelines for AF management in cancer patients. Treatment is based on general recommendations from current guidelines in noncancer patients and the existing evidence in cancer patients, but there is a need of an individualized approach from a multidisciplinary team.

Keywords: atrial fibrillation, cancer

Atrial fibrillation (AF) is the most common arrhythmia as a reason for hospitalization. It affects 1.5-2% of the general population, becomes more frequent with aging and is present in 20% of the individuals over 85 years old. AF influences the quality of life. It is associated with a 5 times higher risk of stroke and is a reason for 20% of all strokes. There is a higher risk for development of heart failure (HF), more frequent hospitalizations and higher mortality (1-3). Cardiac arrhythmias are often found in cancer patients. They can worsen the general condition and complicate the treatment of malignancies. Epidemiological data show that AF occurs with an increased frequency in patients, undergoing cancer surgery. Recent study shows that new-onset AF is a significant risk factor for the subsequent diagnosis of incident cancer (4,5). The development of AF may be induced directly from specific targeted therapies such as ibrutinib (6). The first published results, confirming the higher morbidity of AF are from a case-control study among veterans with colon cancer in 1994 (7). A registry study of
(4,5). The presence of specific targets for therapy, such as ibrutinib, may directly lead to the development of PM (6). The publication of results, confirming the high risk of PM, has led to the establishment of criteria for the diagnosis of PM, which is based on the presence of symptoms and signs of thromboembolic complications. The evaluation of the risk profile is an important step in the management of PM. The prescription of anticoagulants should be done after a comprehensive assessment of the patient's risk factors, including the presence of specific risk factors for PM.

There is evidence that cancer is a prothrombotic state, and the risk of thromboembolic complications starts with the CHA2DS2-Vasc score. Treatment of AF in cancer patients is difficult. Previous studies have shown that AF in cancer patients is more frequent than in the general population and the available data from different studies suggest that the incidence of cancer was significantly higher in women with AF in comparison to women without AF – the risk of cancer was 3 times greater within 3 months of AF diagnosis but still elevated beyond 1 year (HR 1.42) (9). Our data show that 6% of the patients, hospitalized for paroxysmal or persistent AF are with cancer. AF in cancer patient may be a comorbidity, a consequence of the cancer or complication of cancer therapy. Cancer and AF share some common predisposing factors such as age, obesity, dyslipidemia and hypoxia (10). The tumor may invade directly the myocardium or by metastasis. Inflammation and neurohormonal changes, accompanying cancer, play an important role for the AF onset (11,12).

Some of the predictors for post-operative AF in cancer patients are determined. High levels of NT-proBNP 24 hours before and 1 hour after the operation are associated with significantly greater risk for AF (64% versus 5%; p<0.001) (13). Cut-off postoperative values of NT-proBNP of 182 ng/L or BNP over 30 pg/mL are predictive. Nojiri et al. found in patients operated for lung cancer that the ratio between the early transmitral velocity and the tissue early velocity of mitral annulus >8 has 90% sensitivity and 73% specificity for prediction of postoperative AF (14). Other important factors are advanced age, male sex, long duration of surgery, advanced cancer stage, occurrence of surgical complications, need for postoperative blood transfusions, history of hypertension and pre-operative paroxysmal AF. There are no specific guidelines for management of AF in cancer patients. Farmakis et al. suggest an algorithm for screening and treatment, based on guidelines in the general population and the available data in patients with malignancies (5). It is recommended to perform an ECG as a screening for AF at the time of the diagnosis of cancer, perioperative, before the chemotherapy and in case of history for heart fluttering, racing or irregular pulse.

Treatment of AF in cancer patients is difficult. Prescription of anticoagulants should be done after assessment of the risk profile. The evaluation of thromboembolic risks starts with the CHA2DS2-Vasc score. There is evidence that cancer is a prothrombotic state, although it is not incorporated in this risk prediction model. Some cancers (pancreatic, ovarian, lung and primary hepatic) and some anticancer agents (cisplatin, gemcitabine, 5-fluorouracil, erythropoietin, rhuamab-emtansine and ibritinib) may directly lead to the development of PM. The presence of specific targets for therapy, such as ibrutinib, may directly lead to the development of PM.
Atrial Fibrillation in Cancer Patients

Granulocyte colony-stimulating factors are associated with higher thrombotic risk (15). For evaluation of hemorrhagic risk the HAS-BLED score may be used. Intracranial tumors, hematologic neoplasms with coagulation defects and metastatic liver diseases carry greater hemorrhagic risk. The presence of concomitant medication and metabolic disorders determines the risk of unpredicted answer to the treatment with anticoagulants. Treatment with vitamin K antagonists for deep venous thrombosis leads to a 6 times higher risk of bleeding in comparison to non-cancer patients (16,17). Additional data for the administration of novel anticoagulants in cancer patients are expected. Sinus rhythm restoration and maintenance is recommended because it will reduce the usage of anticoagulants. Data show that amiodarone is effective for cardiovascular after lung cancer surgery (18). In metastatic disease and AF rate control is considered. There is a risk of proarrhythmia. Drugs from class III as amiodarone may prolong the QT interval. Some chemotherapeutics such as arsenic trioxide, angiogenic inhibitors and ondansetron have similar effects. The data about the effect of radiofrequency catheter ablation in cancer patients are sparse. The results of left atrial appendix closure are not well studied in this population.

The association between AF and cancer is not well determined. Treatment is based on general recommendations from current guidelines in noncancer patients and the existing evidence in cancer patients, but there is a need of an individualized approach from multidisciplinary team.

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