Case report

Apalutamide treatment of locally advanced prostate cancer

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ABSTRACT

Prostate cancer is most commonly diagnosed cancer in men. The choice of treatment method depends on many factors: the patient's age, other patient's diseases, psychophysical status and expected survival time. Hormonotherapy plays very important role in patients with no possible radical treatment. New therapies apply in patients with castration-resistant metastatic prostate cancer. First registered drug in patients with biochemical progression without metastases is apalutamide.

Key words: prostate cancer, castration resistance, hormonotherapy, apalutamide

INTRODUCTION

Prostate cancer is the most frequent urogenital cancer in men [1]. It is prevalent in elderly group, while increase in morbidity is related to overall extension of life and screening tests introduced to detect the cancer. General condition of the patient, comorbidities, clinical and histopathologic progression, as well as expected survival are decisive factors for selecting the treatment method. Hormonotherapy can be applied as supplementary treatment after radical surgery or radiotherapy. It is most frequently recommended in the case of metastatic disease as palliative treatment. Despite the applied castration, principally pharmacological, the disease progresses after a certain time. This is related to androgen secretion by tumour cells and adrenals. When radical local treatment of the prostate is impossible, and the disease is non-metastatic, Apalutamide can be applied.

It is the first registered drug in the case of non-metastatic prostate cancer progression. SPARTAN clinical trial assessed safety and efficacy of apalutamide in men with non-metastatic prostate cancer with growing PSA levels despite continuous ADT (androgen deprivation therapy). Control group received placebo + ADT. The group treated with apalutamide combined with ADT recorded longer overall survival times and lower risk of death by 25 % [2]. Later, there were also metastases, and longer time to progression.

CASE STUDY

Patient aged 85 in generally good condition. Concomitant hypertension. 10 July 2001 – rectal cancer surgery, pT3N2M0. Supplementary radiotherapy at the dose of 30 Gy/28 f and chemotherapy. Control imaging scans in July 2019 detected suspicious lesions in the prostate. PSA level: 27 ng/mL. Core biopsy of the prostate performed. Histopathologic test of 26.09.2019 diagnosed prostate adenocarcinoma G2 and G3 Gleason 4+ 4, infiltration of seminal vesicles. MRI revealed infiltration of bladder wall – T4N0M0. Bone scintigraphy indicated no metastases, similarly as CT of the chest and abdominal cavity. Due to prior radical treatment of rectal cancer, local progression, and the age, the patient was disqualified from radical surgery and radiotherapy. The patient was introduced to hormonotherapy with flutamide 3 × 250 mg/day for 2 weeks, and then LHRH analogue every 12 weeks. Slow decrease in PSA (in January 2020, PSA 14.56 ng/mL). Starting from October 2020, slow increase in PSA. In December 2020, combined with bicalutamide at the dose of 50 mg/day, and maintained the treatment until March 2021. Due to biochemical progression, from 15.04 2021 to 14.10.2021, patient treated with docetaxel. Treatment terminated due to neurotoxicity. The patient remained under observation due to no options for new therapies. In June 2022, PSA amounted to 31.22 ng/mL. Starting from 07.07.2022, new treatment was introduced under the Polish National Health Fund programme for patients with non-metastatic prostate cancer – apalutamide at the dose of 240 mg/day p.o. Currently, the patient is treated with the drug with good tolerance. PSA totals 17.6 ng/mL. Control imaging scans do not reveal any metastatic lesions. The patient continues treatment.

DISCUSSION

The prevailing share of prostate cancer patients comprises of elderly men, often with comorbidities, and with varying functional ability score. The disease is often diagnosed by coincidence, already significantly progressed. We have the choice of radical local treatment in early stages of the disease, and palliative treatment mainly in the case of metastatic disease (hormonotherapy, chemotherapy). The treatment must be chosen on case-by-case basis, as it depends on many factors. In symptomatic patients with more dynamic course of the disease, chemotherapy (docetaxel) should be considered. In case of slow progression of the disease, however, without symptoms or metastases, in my opinion, hormonotherapy with new antiandrogen drugs with LH-RH blockade seems to be a good therapeutic option.

References

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Ethics:
The authors had full access to the data and take full responsibility for its integrity. All authors have read and agreed with the content of the manuscript as written. The paper complies with the Helsinki Declaration, EU Directives and harmonized requirements for biomedical journals.