Case report

Comprehensive Geriatric Assessment (CGA) in qualification for palliative chemotherapy

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ABSTRACT

More than a half of new cancer cases affects elderly people. The number of patients in that group is constantly raising. Geriatric patients with cancer are very ununiform group with their biological age, comorbidities and conditions. The risk of the treatment's toxicity in that group is increased due to loss of organ reserves. Based not only on metrical age or performance status but using precise assessment aids with choosing proper treatment this lowers the complication rate. Comprehensive Geriatric Assessment (CGA) is a multidimensional tool that helps assess elderly patients including daily living, physical status, cognitive functions, depression, nutrition and comorbidities.

The following describes utility of CGA in 77-year-old male with colon cancer being qualified for palliative chemotherapy.

Key words: geriatric oncology, Comprehensive Geriatric Assessment, CGA

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INTRODUCTION

More than a half of new cases of cancers affect geriatric patients [1]. According to the Polish National Cancer database most malignant neoplasms appear after age 60 (70% of cases in men, and 60% of cases in women), and the risk continues to grow with the highest' peak at age 70 [2]. Geriatric patients with cancer are very various group. Proper qualifications for the treatment is very important in these patient because they are more vulnerable for treatment toxicity. Elderly fragility, decreased organ reserves, comorbidity and polypharmacy carry risks of treatment being a bigger burden rather than the disease [3]. That is why all the mentioned parameters have to be included during preassessment. Qualifications based on ECOG (Eastern Cooperative Oncology Group Performance Status) or metrical age is not recommended in a geriatric group [3]. According to the best medical knowledge the CGA is the most useful tool that helps assess an elderly patient including daily living, physical status, cognitive functions, depression, nutrition, comorbidities and social support [3]. The main outcome of CGA is distinction of 3 groups of patients: fully independent and fit to receive standard cancer therapy without increased risk of treatment-related toxicity; completely the group of high risk with only best supportive care possible and intermediate group of patients who may benefit from cancer therapy but treatment must be tailored to their individual capacity with less toxic "elderly friendly chemotherapy" schemes [3]. Vulnerable Elders Survey (VES-13) questionnaire is the screening test that assesses geriatric status with subjective functional and motor functions. With a VES-13 score of three or more, CGA should be carry out [3, 4].

In 2013 the International Society of Geriatric Oncology (SIOG) published recommendation on colon cancer in elderly, stressing out geriatric evaluation before treatment. The recommendation was that it might be beneficial for all older patients with cancer to receive a geriatric assessment, but further research is needed to elucidate the real place of the geriatric assessment in oncology [5].

CASE STUDY

77-year-old male has been admitted to oncology ward for palliative treatment qualification. He had history of ischemic cerebral infarct, transient ischemic attack (TIA), hypertension, atrial fibrillation and dementia. In 2016 he was operated on because of colorectal cancer – right hemicolectomy has been performed and liver tumor sample taken. According to the histopathological report: adenocarcinoma G II/III with infiltration tele adipose and the nerves in the intestine's muscle layer. In the liver sample, metastatic adenocarcinoma was found. Whole material contained seven lymph nodes with only one involved with metastases. Stage status was evaluated as pT3N1M1a.

Chest, abdomen and pelvis computer tomography (CT) and abdominal ultrasound (USG) has been performed. The scan revealed small, superficial metastasis in liver's segment 8, 15 × 17 mm, and several hypodense changes smaller than 8 mm. Abdominal ultrasound revealed a 20 mm tumor in the right lobe of the liver described as metastatic. In blood level of CA 19-9 was 104,80 U/ml and CEA 1,9 ng/ml. The patient was disqualified from surgical treatment of liver metastasis and referred to systemic treatment. Because of the age screening test with VES-13 has been performed with result of 7 points. Scoring more than 3 points in VES-13 obligates to perform CGA test [3, 4]. It has been carried out with Katz scale (ADL, Activities of Daily Living) [6], nutrition assessment (MNA, Mini-Nutritional Assessment) [7–9], Tinetti Assessment Tool [10, 11], AMTS (Abbreviated Mental Test Score) [12], GDS (Geriatric Depression Scale) – short version [13], CCI (Charlson Comorbidity Index) [14] (fig. 1).

In the functional assessment (ADL) the patient was describe as independent. Nutrition assessment with MNA revealed possible risk of malnutrition, however BMI (body mass index) was 26,77 kg/m^2 and overweight. Proper diet and meals fortification with oral nutrition support (ONS) and regular weight checks were recommended. Tinetti test was also performed giving indirect information about falls risk.

The short version of the Geriatric Depression Scale revealed mild depressive disorder and the support of a clinical psychologist was provided. Cognitive functions were examined with Abbreviated Mental Test Score (AMTS) revealed mild cognitive impairment.

Patient's comorbidities have been assessed with CCI with a score of 8 points which indicated 78% 1-year mortality among patients who survived hospitalization. Holistic approach revealed mild impairments in every examined area. With CGA it is clear that the patient could benefit with oncological treatment if modified to the individual case.

Taking all mentioned above into consideration the patient has qualified for palliative chemotherapy basing on 5-fluorouracil (5-FU) and leucovorin (LF) – the less toxic one and considered as „elderly friendly chemotherapy" with regards to standard first line colon cancer treatment with irinotecan or oxaliplatin (for example FOLFIRI or FOLFOX/XELOX) or triple drug scheme with

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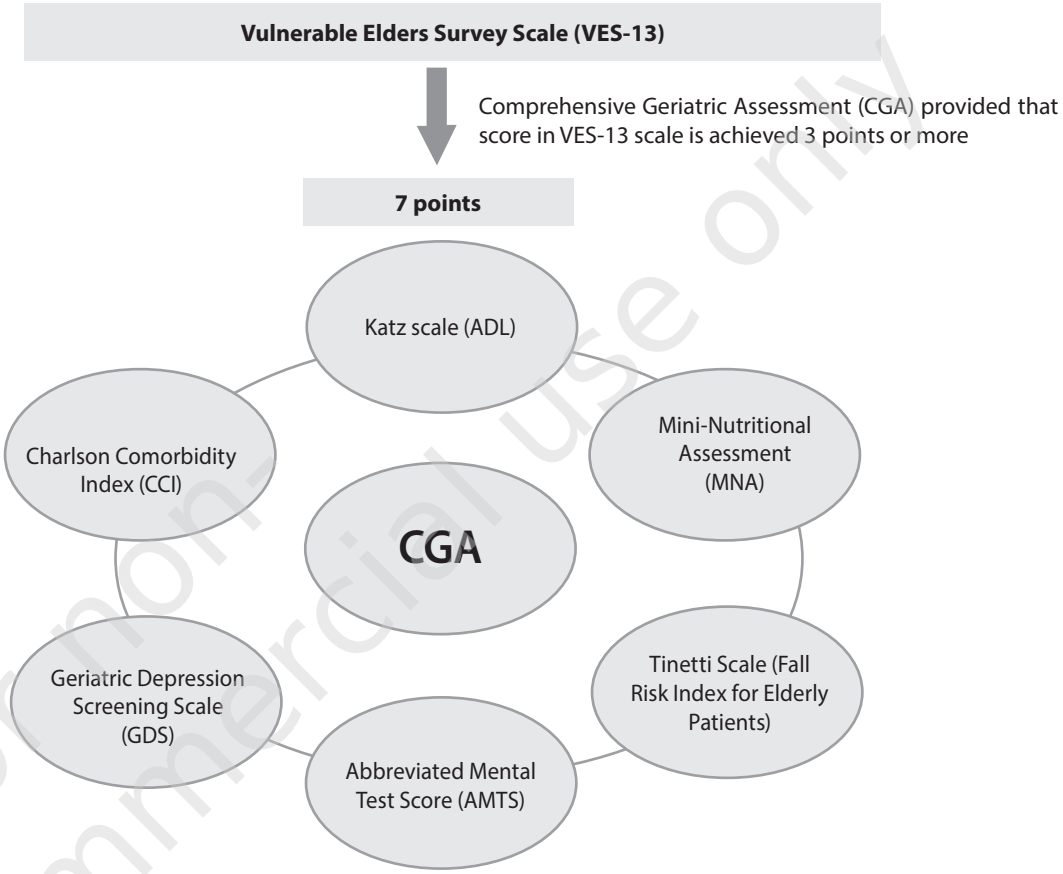
FIGURE 1.
Comprehensive Geriatric Assessment – scale using in this patient.



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anti-EGFR (epidermal growth factor inhibitors) or anti-VEGF (vascular endothelial growth factor inhibitors) regiments.

The therapy consisted of 6 cycles of LF4 with 14 days routine. Treatment did not caused any significant toxicity. General weakness and canula site skin discoloration were sole side effects.

Abdominal ultrasound after 3 months did not show any liver metastases. Ca 19-9 level dropped to 42,89 U/ml. Because of withdrawn consent for treatment and complaint of tiredness, chemotherapy has been discontinued. Patient was referred for observation and symptomatic treatment. In case of progression, continue on LF4 scheme or referral for radiotherapy to be considered.

DISCUSSION

CGA is a useful tool in oncology that helps with finding serious impairments no diagnosed in standard practice. It enhances qualification of patients older than 65 years [3, 4, 15]. Unfortunately, there is still no data on the benefits it might bring and what its cost is [3]. It is worth mentioning that more than half of patients are older than 65 years [1, 2]. Elderly patients with metastatic colorectal cancer (mCR) are grossly underrepresented in most trials with chemotherapy, where median age is < 65 years [5, 16]. Unfortunately, there is still no convincing evidence for clinical benefits, or costs borne it that age group [3].

It is known that geriatric patients could suffer because of higher complication rates due to the loss of organ reserves [3, 17]. Therefore adequate qualification is most important. Findings in geriatric assessment such as malnutrition, dependencies, mental disorders are sole predictors of lower quality of life and may lead to other complications, even death. Those findings are relevant factors with establishing individual treatment and exposes the need for geriatric intervention.

SUMMARY

For geriatric patients with cancer, quality of life is as important as oncology treatment has an affect on their health. Therefore CGA is useful and relevant part of planning the treatment and should be use as routine.

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All authors have read and agreed with the content of the manuscript as written.
This work has been carried out in accordance with The Code of Ethics of the World Medical Association
(Declaration of Helsinki) for experiments involving humans.

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