ONCOLOGY
SOLID TUMORS

OP 27

Bone marrow involvement in non-small cell lung cancer

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Objective: Purpose of the study is to evaluate the possibility of detection DOCs in BM and to identify the frequency of BM involvement in patients with NSCLC, as well as their effect on the population of bone marrow lymphocytes.

Case report: There is evidence that disseminated tumor cells (DOCs) in the bone marrow (BM) are precursors of subsequent distant metastases. There is evidence indicating an important role for bone marrow lymphocyte subpopulations in hematogenous metastasis. The detection of DOCs in non-small cell lung cancer (NSCLC) will provide important information about the features of metastasis, as well as the possibilities of identifying new targets for the treatment of NSCLC.

Methodology: 62 bone BM of NSCLC patients were studied by morphological and immunological methods. DOCs analysis was performed using flow cytometry (FACS Canto II, USA, Kaluza Analysis v2.1 software), monoclonal antibodies to CD45, cytokeratins directly labeled with various fluorochromes were used. Lymphocyte populations CD3, CD4, CD8, CD19, CD20, CD16, CD27 were studied.

Results: DOCs (EPCAM+CD45-) in the BM were found in 43.5% of patients (threshold level:1 cell per 10 million myelocaricytes). The presence of DOCs did not correlate with tumor size, lymph node status, stage of the tumor process. The highest detection rates of DOCs were observed at stages IA and IIA: 60.7% and 58.3% respectively. BM involvement in adenocarcinoma was observed in 45% cases, in squamous cell carcinoma - in 37% samples ($p = 0.501$). It was found that DOCs are more often detected in more differentiated tumors ($p = 0.023$). Significant correlations between the presence of DOCs in the BM and myelogram parameters have not been established. A decrease in the number of granulocyte germ cells was observed in 4% of BM involvement ($p = 0.036$). A significant increase in the level of subpopulations of CD16 + CD4-NK-cells ($p = 0.002$), CD27 + CD3 + T-cells ($p = 0.015$) with bone marrow damage was revealed.

Conclusion: The possibility of detecting DOCs in the BM of NSCLC patients has been established. BM involvement was 43.5%. DOCs are detected even in the early stages of NSCLC. Relationship between BM involvement and the degree of tumor differentiation was found. More frequent BM involvement was observed in adenocarcinoma compared with squamous cell carcinoma of the lung. The relationship

between DOCs and bone marrow lymphocyte populations was revealed: subpopulations of CD16 + CD4−, CD27 + CD3+.

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The prognostic significance of neutrophil/lymphocyte ratio in patients with terminal cancer

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Objective: Predicting the life expectancy in patients with terminal cancer is important in terms of clinical assessment and treatment approaches. Although, various prognostic scoring systems have been established and still often used, those are based on subjective parameters. There is a recently increased tendency to anticipate prognosis by prognostic laboratory tests that consist of objective parameters and are easily applied. The role of inflammation in cancer development and progress is a well-known topic. Neutrophil/lymphocyte ratio (NLR) is a objective parameter that could show the level of systemic inflammation. Increasing NLR has been associated with worse prognosis in many type of cancer. In this study, we evaluated the prognostic role of NLR in terminal cancer patients.

Methodology: Patients of 432 who were enrolled as a terminal cancer in Department of Medical Oncology were included in this study. The information of those patients were obtained retrospectively from medical archive records. Hemogram and biochemistry results which were examined on the first day of patients' last hospitalisation were used. Statistical analyses were done by Independent Sample T or Mann Whitney U test. Two main subgroup were defined; patients who died in first 30 days from last hospitalization or patients who died after 30 days from last hospitalization.

Results: Descriptive data and statistical analysis results are shown in Table 1. The median age of patients was 62. 268 (b) of patients were male and 164 (8) were female. The most frequent cancer type were lung (1), colorectal (%9), and esophagus/stomach (%8), respectively. While the median NLR was 11.36 (min–max, 0.11–367.67), the median thrombocyte/lymphocyte ratio (PLR) was 305.39 (min–max, 3.23–4150). 381 (88%) of the patients were in the group that died within 30 days after the last hospitalization. The median NLR was significantly higher in patients who died within 30 days compared with patients who died after 30 days (11.84 vs. 7.5, $p < 0.001$, respectively) as shown in Table 1. On the other hand, there were no differences between 2 group in terms of other parameters including hemoglobin, leukocyte count, lactate dehydrogenase (LDH), mean platelet volume (MPV), PLR, CRP/albumin ratio, monocyte count, and prognostic nutritional index (PNI) (Table 1).

Conclusion: There is a strong relationship between inflammation and cancer. NLR is a marker to show inflammation. In this study, we showed that increased NLR was associated with worse prognosis in patients with terminal cancer. There are few studies evaluating the prognostic role of NLR in terminal

cancer patients in the literature, and our study results are compatible with those. The limitation of our study is to be a retrospective design and single-center study. Further prospective multi-center trials are needed to clarify the prognostic role of NLR. In conclusion, we think that NLR can be used safely for anticipating prognosis in terminal cancer patients due to its easy usage and objectivity.

OP 29

Anti-Yo positive paraneoplastic cerebellar degeneration associated with ovarian cancer: a rare case report

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Objective: Paraneoplastic cerebellar degeneration (PCD) is a rare neurological complication of cancer characterized by rapid development of cerebellar ataxia resulting from tumor-induced autoimmunity against cerebellar purkinje cells. Anti-Yo antibody which is also known as anti-Purkinje cell cytoplasmic antibody type-1, is highly specific and the most frequent antibody in patients with PCD. Here we present a case of anti-Yo-associated PCD in a patient with ovarian cancer. After the patient was diagnosed with PCD, ovarian cancer recurrence was shown.

Case report: A 54-year-old female patient, who was in remission with ovarian cancer applied to us with a 6-month history of progressively worsening unsteadiness while walking. She was diagnosed as ovarian cancer in November 2016 and operated, and then 6 cycles of carboplatin plus paclitaxel adjuvant treatment was given. She did not have any other disease and history of drug, smoking, and alcohol use. There was no important family history. On physical examination, her speech was minimally dysarthric. While she was walking, ataxia was observed. Other system examinations were normal. Hemogram, biochemistry, muscle enzymes, thyroid function tests, vitamin B12, and 25-OH-D were in the normal range. CA-125 increased compared to 3 months ago.(23–53 U/mL)Because of the increased CA-125 level, computer tomography and then PET-CT scan was taken. There was a 1.5-cm diameter hypermetabolic nodular pelvic lesion. Brain MR and EMG were planned for complaints of walking and balance disorders. Nothing was found in the examinations and tests to explain the current condition of the patient. The paraneoplastic panel was taken from the blood and cerebrospinal fluid (CSF) samples. Anti-Yo antibodies were three positive in both the CSF and blood samples. The patient was diagnosed with PCD due to clinical findings and anti-Yo positivity both CSF and blood samples. Since the main treatment of paraneoplastic syndrome was the excision of the primary lesion, it

was discussed for the excision of the recurrent mass. But this patient was not eligible for re-surgery. So carboplatin, gemcitabine plus bevacizumab treatment protocol was initiated for recurrent ovarian cancer. Plasmapheresis was performed 5 times, every other day. A significant improvement in walking were observed in the patient after 2 weeks from discharge.

Conclusion: Here we described a patient who developed ataxia 3 years after remission of ovarian cancer and diagnosed with PCD. Diagnosing a paraneoplastic syndrome and mild elevation of CA-125 level have led to the diagnosis of recurrence of ovarian cancer. In approximately 30% of patients, the ataxic symptoms occur when the cancer is in remission as it was in this reported case. Therefore, when a patient is diagnosed with PCD, whole-body screening is necessary to reveal the underlying malignancy. Although there is a strong association between PCD and Anti-yo; its pathological function is still not clear. Treatment of PCD is unfavorable and patients usually have a poor prognosis. Plasmapheresis, intravenous immunoglobulin (IVIG), and cyclophosphamide are the treatment options. Also, it is very important to treat underlying malignancy. In conclusion, in patients with unexplained neurological symptoms and a history of cancer, paraneoplastic syndromes should be considered and an underlying malignancy should be investigated.

OP 30

Gastroenteropancreatic neuroendocrine carcinoma: single center experience

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Objective: In general, all high grade, poorly differentiated gastrointestinal neuroendocrine carcinomas (GIS-NEC) exhibit aggressive behavior characterized by widespread metastases in the early stages. It relapses very quickly, even in the early stages. The prognosis is extremely poor. These tumors show similarities with small cell carcinoma of the lung in terms of morphology, biological behavior and chemosensitivity. In this study, we aimed to investigate survival according to primary tumor localization and the stage besides clinical and demographic data of GIS-NECs.

Methodology: Twenty-seven patients with the diagnosis of GIS-NEC were included in the study. Patients under the age of 18, patients with another malignancy other than GIS-NEC and patients having GIS NEC but whose data were missed, were not included in the study.

Results: In this study, 15 male (55.6%) and 12 female (44.4%) patients were included. Median age was 66 years old. The primary localizations were as follows, in 15 (55.6%) patients; gastric, in 4 (14.8%) patients; esophagus, in 4 (14.8%) patients; colorectal, in 2 (7.4%) patients; pancreas and in 2 (7.4%) patients; small intestine. At the time of diagnosis, in 21 (77.8%) patients Stage 4 disease, in 5 (18.5%) patients stage 2 and 3 disease and in 1 (3.7%) patients stage 1 disease was present.