A magnetic bead enrichment technique using the 9.2.27 mAb was used for the bone-marrow (BM), followed by immuno-staining with anti-HMB45 and -MelanA mAb to verify the specificity of the sorting. RT-QPCR for Melan-A and Tyrosinase on mRNA directly extracted from whole blood was used. In reconstruction experiments, the detection limit of the 2 techniques was 2 cells out of 20 10^6 nucleated cells for the BM and 2 cells in 7 ml of blood, respectively.
Between January and October 2008, 15 (9 F/6 M) patients with ocular melanoma who had a limited number of liver metastasis accessible to surgical resection were included. All patients had liver metastases proved by histological results. Blood samples were successfully tested in 15 patients: only 3 patients harbored barely significant levels of Melan-A or Tyrosinase mRNA. For the BM, the mean number of nucleated cells analyzed cells was 18 $\pm$ 18 millions (m $\pm$ SD, range $3-80\times10^6$). No undisputable tumor cells could be found in either the unseparated or positive/negative 9.2.27 magnetically sorted fractions.
Our negative results could be related either to a technical failure or to a true absence of disseminated tumor cells in ocular melanoma patients. Indeed, the discrepancy between our results and those previously published could be due to the high specificity of our technique given by the final anti-HMB45/melan-A immuno-staining.
Alternatively, this could be related to the selection of patients with limited liver involvement whose tumor cells and micro-environment may differ from those of patients with widespread liver metastases.

9337 POSTER

Study the chromosomal pathology in mononuclears of peripheral blood of patients with eye melanoma

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Background: To study chromosomal aberrations in peripheral blood lymphocytes of patients with eye melanoma.
Material and Methods: 16 patients with eye melanoma have been surveyed. From them men – 10, women – 6. Age of patients varied from 27 till 70 years. In 13 patients tumor was localized in vascular environment, at 3 – in eye conjunctiva. Diagnosis was put on the basis of patients' complaints, anamnesis, clinical and instrumental examinations, cytologic and histologic analysis. For comparison there was lead cytogenetic analysis in practically healthy 20 people of corresponding age and sex. For research of chromosomal aberrations in peripheral blood lymphocytes, there were used their temporary cultivation with fytohemagglutinin, by standard technique. The analysis of as structural and genomic disturbances of chromosomes was investigated according to the International system of cytogenetic nomenclatures. Primary cytogenetic research of patients was spent before their treatment.
Results: At studying of chromosomal pathology in practically healthy people the average level of chromosome aberrations which has made $1.6\pm0.4\%$. These data do not exceed the standard level for healthy people. Cytogenetic analysis lead in patients with eye melanoma has shown, that at 8/10 male patients and in all women chromosomal disturbances (6.0% and 8.4% accordingly) which have been presented with the deletion of short shoulder of 5 chromosomes (5′-), long shoulder of 17 chromosomes (17q-), hypo-, hyperaneuploidy and polyploidy of cells. Except that on the average 2−3 chromosomes had heps.
Conclusion: Thus at tumor process in patients with eye melanoma there is observed increase of chromosomal pathology.

9338 POSTER

Experience in administration of high-dose interleukin-2 immunotherapy in combination with chemotherapy for disseminated skin melanoma management

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Background: In the overwhelming majority of trials evaluating immunotherapy benefit in the treatment of disseminated skin melanoma, recombinant interleukin-2 is used which is produced by E. Coli and is not a complete analogue of human endogenous interleukin-2 molecule. Roncoleukin® (Biotech, Russia) is a complete structural and functional analogue of human endogenous interleukin-2 produced from nonpathogenic Saccharomyces cerevisiae.
Materials and Methods: Our prospective randomized trial evaluated the results of the treatment of 80 disseminated skin melanoma patients. The patients of arm 1 (n = 31) received chemotherapy (dacarbazine 800 mg/m^2, day 1 and cisplatin 20 mg/m^2, days 1−4). The treatment of arm 2 (n = 31) patients was supplemented with high-dose Roncoleukin® (9 mg/m^2, days 1−5), and arm 3 (n = 20) – Decrescendo regimen of Roncoleukin® (18 mg/m^2, day 1; 9 mg/m^2, day 2; 4 mg/m^2, days 3−4). The median follow-up was 8.5 months.
Results: The most common complications in the study arm of chemoimmunotherapy (CTCAE) were grade 1−2 fever (57.0 and 60.0%), grade 3 fever (0.9 and 3.3%), grade 1−2 hypotension (0.9 and 0.0%) in the patients of arms 2 and 3 respectively.
The objective response rate was 19.4%, 29.0% and 33.3%, the median progression-free survival (PFS) was 3.2, 5.3, and 7.8 months ($p = 0.004$), median overall survival was 8.3, 10.0 and 8.7 months ($p = 0.4$) in arms 1, 2 and 3 respectively. The blood serum level of lactate dehydrogenase (LDH) exceeding more than 1.5 fold the upper reference value was an unfavourable prognostic factor with no impact of the treatment type (chemotherapy or chemoimmunotherapy) on its efficacy ($p = 0.7$). At the same time, chemoimmunotherapy for disseminated skin melanoma patients with the LDH level not exceeding more than 1.5-fold the upper reference value increased the median PFS up to 11.2 months ($p = 0.005$). The prognostic factors of positive response to chemoimmunotherapy in this patient group were the number of lymphocytes, CD3+, CD16+, CD25+, CD4+/CD8+ ratio before the treatment start, as well as the change in CD4+/CD8+ ratio and the number of CD3+, CD4+, CD8+ lymphocytes after the completion of the 1st course of chemoimmunotherapy (Cox regression model, $p = 0.0005$).
Conclusion: High-dose Roncoleukin® in the treatment of disseminated skin melanoma is satisfactorily tolerated and may be beneficial in patients with the LDH level not exceeding more than 1.5-fold the upper reference value and with initially decreased rates of cellular immunity.

9339 POSTER

Ocular melanoma: a single-institution experience in a rare disease

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Background: Melanomas are the most common primary intraocular malignancy in adults. Primary ocular melanoma can involve the uveal tract, conjunctiva, eyelid, or orbit, comprising approximately 5% of all melanomas. The majority (85%) of ocular melanomas is uveal in origin; primary conjunctival and orbital melanomas are rare. Our goal was to characterize the population of patients with the diagnosis of ocular melanoma, treatment, response to treatment and survival.
Material and Methods: We present a single-institution retrospective study that reviews all patients diagnosed with ocular melanoma from January 2000 to December 2006. Data on demographics, tumour characteristics, therapeutic modalities and treatment results were analysed.
Results: Our sample included 32 patients (pts), being 21 of them females. Median age at diagnosis was 60 years (range: 38−81). The main complain (75%) in those pts was visual loss. Clinical evidence of metastatic disease at the time of presentation was detected in 3 pts. Up to 84% of ocular melanoma were uveal (primarily choroidal) in origin. Nearly all (94%) of them were managed with primary enucleation or orbital exenteration (in locally advanced disease). Chemotherapy was the first choice in metastatic disease, with regimens including dacarbazine. Median follow up was 42 months. The rate of recurrence was nearly 10%. The 5-year overall survival was 64.5%. Comparison between pts whose tumours had intraocular spread and those with extraocular extension, didn't reveal a statistical difference in overall survival ($p = 0.62$). The difference in survival concerning histological subtypes wasn't statistical significant ($p = 0.35$). The tumour thickness did not influence survival ($p = 0.52$). Pts with tumours with mitotic activity $\leqslant$1/40 high power fields (hpf) had better overall survival than pts whose tumours had an index superior to 1/40 hpf ($p = 0.027$). Lymphocyte infiltration was associated with worse survival, although not reaching statistical significance ($p = 0.064$).
Conclusions: Primary surgical management is not always considered the standard treatment in ocular melanoma, but it allows a histological evaluation. Cytogenetic and molecular factors are increasingly being investigated in order to identify abnormalities that could be related to prognosis and survival: alterations in chromosomes 3, 6 and 8 are strongly related to tumour behaviour.