MAP4K3, CRKL and MAP2K4 were down-regulated, leading to cell cycle arrest and apoptosis.
Conclusions: Genistein induced growth inhibition and apoptosis in AML and APL cell lines in dose and time dependent manner. Our data suggests the potential clinical usage of genistein in anti-leukemia therapy. To our knowledge, this is the first description of genome-wide gene expression study for anti-leukemia effect of genistein in AML and APL cells. Our findings that genistein triggers different signaling pathways in AML and APL suggest that the impact of treatment in different hematologic malignancies can be prospectively monitored by measuring activities of distinct pathways.

Publication
Haematological malignancies

986 PUBLICATION

Clinical study of combining arsenic trioxide (As2O3), all-trans retinoic acid (ATRA) and idarubicin (IDA) for induction therapy on the patients with relapsed acute promyelocytic leukemia(APL)

J. Ma, J. Liu, B. Zhang, Z. Zhan, M. Jin, L. Wang, T. Gong, X. Shao.
Harbin Institute of Hematology and Oncology, Harbin, China

Purposes: To study the effects of treatment by combining 3 drugs including As_2O_3, ATRA, and IDA for long-term survival and relapse time on APL patients with relapse/relapses.
Methods: Between 1996–2003, long-term follow-up was carried out on the effects of treatment of combining 3 drugs including As_2O_3, ATRA, and IDA on 46 APL patients with relapse/relapses. All cases were diagnosed, according to the standard criteria of morphologic and cytogenetic examination. Among 46 cases, 36 cases had more than one relapse. The protocol of the 3 drugs administration included: As_2O_3 10mg iv and ATRA 30 mg p.o per body daily for continuous 32 days, combined with IDA 10mg per body per day on day 1, 3, 5, respectively.
Results: Among 46 cases, 37 cases achieved complete remission(CR), with CR rate of 80.4%. Five cases died related with treatment. Among 37 CR cases, 34 cases occurred infection during induction therapy, with infection rate of 90%, nevertheless, they all recovered after the administration of G-CSF and anti-infection agents. The 5-year disease free survival rate was 72%.
Discussion: The achievement of CR for APL patients resulted from inducing differentiation and apoptosis of the leukemia clone by the use of As_2O_3, ATRA, it also resulted from the cytotoxicity to directly destroy DNA of leukemic cells by the use IDA. In recent years, the relapsed APL patients were mainly treated by using combining drugs, with the effect of synergism. This study indicated that the combination of 3 drugs including As_2O_3, ATRA, and IDA could induce APL patients with relapse/relapses to achieve CR again, with 5-year disease free survival rate of more than 70%. Considering the relatively high incidences of infection and hemorrhage, it is advised to use this protocol in specialized hematology centers.

987 PUBLICATION

Rituximab maintenance therapy post Autologous Stem Cell Transplant (ASCT)

R.D. Rice[1,2], C.H. Moskowitz[2]. [1]*Memorial Sloan-Kettering Cancer Center, Hematology, New York, USA;* [2]*University of Utah, College of Nursing, Salt Lake City, UT, USA*

Background: The anti-CD20 monoclonal antibody, Rituximab, is commonly administered after high-dose chemoradiotherapy and autologous stem cell transplant (ASCT) for B cell malignancies. Two series, one by Horwitz et al (2004) and another by Brugger et al (2004), using different schedules, administered Rituximab post-ASCT, importantly to Rituximab naive patients, and showed >80% two year event-free survival (EFS). The role of Rituximab post-ASCT in patients who have received Rituximab as part of front-line or salvage therapy has not been reported.
Materials and methods: We report on a series of 29 patients with either diffuse large B cell lymphoma (n = 19) or mantle cell lymphoma (n = 10) who received post transplant Rituximab maintenance therapy on one of three schedules: weekly ×4 weeks at day +42 and day +180 (n = 11); every 8 weeks for 6 treatments (n = 6); or other (n = 12). There were 19 males and 10 females. The mean age was 50 (range 22–69). All patients had received Rituximab as part of their initial chemotherapy regimens. All patients underwent PBPC mobilization after Rituximab and ICE (ifosfamide, carboplatin and etoposide). The transplant conditioning regimens were: BEAM (n = 17); CBV (n = 6); TBI/IFX/VP-16 (n = 1); TBI/IFX/CY (n = 4) and Mel/VP-16 (n = 1).
Results: Patients received a mean of 7.2 doses of Rituximab (range 1–16). The mean day of the start of Rituximab was day +65 post ASCT and concluded on day +293 post ASCT. Rituximab was administered in an outpatient setting.
The actuarial EFS at a median follow-up of 1.8 years is 83%. The mean absolute neutrophil count (ANC) nadir was 1.5 K/mcL. Ten patients (34%) experienced significant neutropenia (ANC <1.0 K/mcL) but all were afebrile and did not encounter any adverse clinical consequences of the neutropenia. Filgrastim or Pegfilgrastim was not used consistently in this cohort. None of the patients experienced clinically significant thrombocytopenia.
Conclusions: Rituximab is a well tolerated post-transplant maintenance regimen that is not schedule dependent and appears to improve EFS compared to historical controls. Neutropenia is common but with minimal consequences.

988 PUBLICATION

Aberrant cytoplasmic BCL10 expression reflects advanced disease in patients with mucosa-associated lymphoid tissue lymphoma of ocular adnexa

Y. Ejima[1], R. Sasaki[1], Y. Okamoto[1], T. Maruta[1,2], A. Azumi[3], Y. Hayashi[4], D. Miyawaki[1], Y. Ota[1], T. Soejima[1,5], K. Sugimura[1]. [1]*Kobe University Graduate School of Medicine, Division of Radiology, Kobe, Japan;* [2]*National Hospital Organization Himeji Medical Center, Department of Radiology, Himeji, Japan;* [3]*Kobe University Graduate School of Medicine, Division of Ophthalmology, Kobe, Japan;* [4]*Kobe University Graduate School of Medicine, Division of Molecular Medicine and Medical Genetics, Kobe, Japan;* [5]*Hyogo Medical Center for Adults, Department of Radiation Oncology, Akashi, Japan*

Background: Some specific chromosomal aberrations are implicated in the development of mucosa-associated lymphoid tissue (MALT) lymphoma. These aberrations are also associated with BCL10 protein expression. However little is known about the relationship between the BCL10 expression and tumor progression.
Patients and methods: We reviewed clinical data and studied immunohistochemical analysis of BCL10 expression in 38 patients with MALT lymphoma of ocular adnexa treated with radical radiotherapy at our institution. Thirty-five patients had primary disease (33 stage IEA, 2 stage IIEA) and 3 patients had histories of lymphoma (2 stage IEA, 1 stage IIEA). The median follow-up duration was 48 months with a range of 21–159 months.
Results: According to the BCL10 expression pattern, patients were divided into three groups: aberrant nuclear expression (n = 10, 26%), cytoplasmic expression (n = 7, 18%), and normal staining (n = 21, 55%). Local control was achieved in all 38 patients. Extra orbital recurrence was observed in 6 patients (16%). Nuclear expression was detected in none (0%) of these 6 relapsing and in 10 (31%) of 32 non-relapsing patients, respectively. (P = 0.168). Cytoplasmic expression was detected in 3 (50%) of 6 relapsing and in 4 (13%) of 32 non-relapsing patients, respectively. (P = 0.063). Nine patients (24%) represented advanced disease with extra orbital lesions, including stage II, the history of lymphoma and recurrence. Nuclear expression was detected in none (0%) of these 9 advanced and in 10 (34%) of 29 non-advanced disease, respectively. (P = 0.079). Cytoplasmic expression was detected in 4 (44%) of 9 advanced and in 3 (10%) of 29 non-advanced disease, respectively. (P = 0.041).
Conclusions: In MALT lymphoma of ocular adnexa, aberrant cytoplasmic BCL10 expression is detected at a high frequency in advanced disease, while nuclear BCL10 expression tends to be detected in localized disease.

989 PUBLICATION

Result of acute lymphoblastic leukemia (MCP 841) protocol in a tertiary center from Eastern India

S. Mukhopadhyay[1], B. Barman[2], R. Ghosh[2], A. Mukhopadhyay[2], I. Magrath[3]. [1]*Netaji Subhash Chandra Bose Cancer Research Instit, Haematology, Kolkata, India;* [2]*Netaji Subhash Chandra Bose Cancer Research Instit, Medical Oncology, Kolkata, India;* [3]*INCTR, Medical Oncology, Belgium*

Background: Acute Lymphatic Leukemia in children is a curable disease in the range of 80–90% in developed Countries by aggressive protocol like BFM, St. Judes'. In developing Countries like ours, patients can't tolerate those aggressive protocol because of Socio-economic and nutritional factors. The less aggressive Protocol like INCTR (International Network for Cancer Treatment & Research) are suitable in developing Countries like ours.
Materials and methods: We treated 331 Children (age range 1–25 years, median age of 7–8 yrs) with MCP 841 Protocol at Netaji Subhash Chandra Bose Cancer Research Institute, Kolkata, India a tertiary cancer centre of Eastern India during period from April'99 to Dec'04. There was female