

Summary

In recent years it has been an unprecedented development of knowledge of biology and treatment options of chronic lymphocytic leukemia (CLL). Survival of patients with CLL was improved by the introduction of the monoclonal antibodies (anti-CD20) and combined chemoimmunotherapy regimens. Despite this undeniable advance in the treatment of CLL and progress in knowledge of CLL biology and pathophysiology, many current aspects of care of these patients remain unresolved. In our work we focus on epidemiology of CLL, treatment of relapsing/refractory CLL patients, rituximab infusion-related adverse events and venous thromboembolism in CLL patients.

Incidence of CLL in Hradec Králové district during period 1999-2013 was 8.2 patients per 100,000 persons per year. Trends in epidemiology were analyzed after splitting patients into two groups according to the period in which the diagnosis was made: n=92 in the period 1999-2005 and n=108 in the period 2006-2013. Significant prolongation of survival (median OS not reached vs 86 months) was observed in patients treated during the period 2006-2013 in comparison to those treated in the period 1999-2005. However, the improvement of overall survival was achieved only in younger patients (≤ 70 years).

Patients with refractory CLL have highly unfavourable prognosis. High-dose methylprednisolone in combination with rituximab is active in the treatment of relapsed/refractory CLL but serious infections are frequent. In a cohort of 60 patients we retrospectively analyzed the efficacy and safety of rituximab plus dexamethasone (R-Dex) regimen in the treatment of these patients. Our results suggest that R-Dex is effective treatment of patients with relapsed/refractory CLL. The regimen also seems to be a suitable choice for debulking before allogeneic stem cell transplantation. However, major infections remain relatively frequent despite combined antimicrobial prophylaxis. In addition, durable responses are rare.

The most frequent toxicity of rituximab, monoclonal antibody with proven efficacy in treatment of CLL, are infusion reactions. The aims of our study were to assess the frequency of infusion reactions in the routine practice and to evaluate its relation to parameters of tumour load and possible association with treatment efficacy. The safety of rapid infusion of rituximab in CLL patients was also evaluated. In our study we analyzed 108 patients with CLL treated with rituximab-containing regimens. Rituximab infusion-related toxicity in patients with CLL is relatively frequent (32% patients). However, occurrence of infusion-related symptoms can be reduced by proper premedication and severe adverse events are uncommon. Subsequent doses of rituximab could be safely administered by rapid-infusion protocol. We did not find statistically significant association between rituximab infusion toxicity and effectiveness of treatment.

Venous thromboembolism (VTE) is a major cause of morbidity and mortality in patients with malignant tumours (incl. hematologic malignancies). Data regarding VTE in CLL is very limited. The aims of our study were to evaluate the occurrence of VTE and to assess the risk and prognostic factors for VTE in CLL. In a cohort of 346 patients we demonstrated that VTE is a relatively frequent complication in patients with CLL (11% of patients). Our findings highlighted possible role of CLL in the development of VTE.