V763

Efficacy of different immunoglobulin doses in the prevention of severe and serious infections in patients with secondary immunodeficiencies – results from a multicenter observational study with Privigen®

Ehlers H.-U.1, Innig G.2, Otremba B.3, Plath M.4, Slawik H.R.4, Reiser M.5, Weide R.6, Pfründer D.7
1Schwerpunktpraxis und Tagesklinik für Hämatologie und Onkologie, Hannover, Germany, 2Gemeinschaftspraxis für internistische Onkologie und Hämatologie, Rheine, Germany, 3Onkologische Praxis, Oldenburg, Germany, 4Onkologische Schwerpunktpraxis, Augsburg, Germany, 5Praxis internistischer Onkologie und Hämatologie, Köln, Germany, 6Praxisklinik für Hämatologie und Onkologie, Koblenz, Germany, 7CSL Behring, Hattersheim, Germany

Introduction: In an interim analysis of an ongoing multicenter observational study on the efficacy and safety of the polyvalent i.v. immunoglobulin product (IVIG) Privigen®, we investigated a possible correlation between the two mostly used treatment regimens in Germany - 10 g or 20 g once a month - and the incidence of severe and serious infections (acc. to FDA criteria) in secondary immunodeficiencies (SID).
Methods: All patients fulfilling the following criteria were included in this analysis: 1) SID; 2) observation period ≥120 d; 3) ≥6 Privigen® infusions; 4) stable dosing, defined as identical doses from the 2nd up to the last administration (a differing loading or test dose at baseline was accepted); 5) a series of at least 4 consecutive dosing intervals (= treatment cycles) each with a duration of at least 21 d and not more than 35 d (any time during the observation period); 6) no other IVIG indication than SID. The cut-off date was Dec. 19, 2016.
Results: 835 patients (454 m, 381 f; average 68 y, 76 kg) in 112 centers fulfilled the above criteria. The most frequent underlying diseases were CLL (n = 422), myeloma (n = 175) and other NHL (n = 182). The mean observation period was 20.5 mo; the median dosing interval was 28 d. Most patients had a stable Privigen® dosing of either 10 g (n = 575; 69%) or 20 g (n = 192; 23%); 68 patients (8%) received other dosages. In order to reduce confounding effects of varying dosing intervals, the following «steady-state rule» was applied: A treatment cycle was considered evaluable if each of the 3 preceding dosing intervals was 21–35 d long. 8,803 out of 15,687 treatment cycles (all dosages) fulfilled this condition. An infection was considered evaluable if it occurred in an evaluable treatment cycle and started ≤35 d after the preceding Privigen® infusion. With the 10 g regimen, 41 severe or serious infections occurred in 5,941 evaluable treatment cycles, while with the 20 g regimen, it was only 5 in 2,086 (p = 0.018), corresponding to 8.8 vs. 3.2 severe or serious infections per 100 patient years (56% pneumonias). For 12 out of 575 patients with the 10 g regimen and none out of 192 patients with the 20 g regimen, deaths related to infections were reported (p = 0.044; follow-up period 2 months). There was no increase of reported adverse reactions with the higher dose.
Conclusion: With a monthly dose of only 10 g IVIG compared to 20 g, SID patients have a considerably higher risk of severe and serious infections.