Quality of life (QoL) and neurotoxicity in germ-cell cancer survivors (GCCS)

Background: The majority of patients with testicular cancer become long-term survivors. However, treatment is associated with late effects which may hamper QoL. The aims of the present study were to assess the impact of treatment on long-term QoL and evaluate the influence of neurotoxicity on QoL.

Methods: All GCCS identified in the Danish DaTeCa database were asked to fill in a questionnaire concerning late-effects Nov 2014 – Jan 2016. QoL was assessed with EORTC-QLQ C30 including 30 items divided into 15 subscales. Neurotoxicity was assessed with the FACT/GOG NTX12-scale including 12 items, divided into 4 subscales (neuropathy, ototoxicity, motor impairment, and dysfunction). Patients were divided into treatment groups; surveillance only (reference), n = 1092, BEP chemotherapy (CT), n = 790, and more than one line of treatment (MTOL), n = 82. Outcomes were compared with ordinal logistic regression using treatment and attained age as covariates.

Results: In total, 2308 patients answered the questionnaire. Median attained age was 53.5 years (range: 24.9 - 94.5), and median time from treatment was 18.8 years (range: 7.0 - 32.2). Overall, Global health status was good, mean: 75.4, SD: 20.0. Treatments were significantly negatively associated with QoL in many subscales; CT: dyspnea, financial difficulties, impaired cognitive function, impaired social function, MTOL: impaired global health status, fatigue, dyspnea, financial difficulties, impaired physical function, impaired cognitive function, and impaired social function. Neurotoxicity was closely correlated to treatment. RT was associated with three of four subscales; CT and MTOL were associated with all subscales. When adjusting QoL outcomes for neurotoxicity, all negative associations between QoL and treatment disappeared except dyspnea and impaired social function in the MTOL-group. Neurotoxicity was associated with all EORTC-subscales (p < .001).

Conclusions: Treatment with BEP and MTOL were associated with several QoL subscales in GCCS. However, when adjusting for neurotoxicity the associations generally disappeared. Neurotoxicity correlated strongly with QoL.

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