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B-Lymphocyte Stimulator: A New Potentially Useful Serological Marker in the Follow-Up of Patients with Neuroendocrine Tumors

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Aim of the study. To confirm B-Lymphocyte Stimulator (BLyS) as a new possible prognostic marker in the follow-up of patients with neuroendocrine tumors (NET).Methods. One hundred-one (n. 101) consecutive patients with NET and 56 sex-matched controls enrolled in the study. Patients were classified in 2 subgroups according to clinical course: evidence of persistent but stable disease or in remission (n = 59) and patients with evidence of recurrent disease (n = 42). BLyS and Chromogranin A (CgA) serum levels were analyzed by ELISA at baseline (n. 101) and at multiple time points in the follow-up (2 points n. 45; 3 points n. 12), registering disease behavior.Results. BLyS levels were up-regulated in NET patients compared to control subjects (1129±489 pg/ml vs 655±158 pg/ml; p <0.0001) and correlated with tumor differentiation (1042±371 pg/ml in gastroenteric G1 - typical lung carcinoid vs 1277±590 pg/ml in gastroenteric G2 – atypical lung carcinoid; p=0.019; unpaired t-test) and disease behavior (912±248 pg/ml in pts with stable disease/remission versus 1433±578 pg/ml in pts with recurrent disease; p <0.0001). In the follow-up (overall 11.8±8.6 months, range 3-36) BLyS levels remained in the normal range (<939 pg/ml) in patients with stable disease (n. 14, from 877±275 pg/ml to 844±209 pg/ml; p=ns; fig. 1), decreased in pts going from active disease to stable disease/remission (n. 10, from 1402±262 pg/ml to 1105±269 pg/ml; p=0.002; fig. 2), but increased in patients with further disease progression (n. 14, from 1665±842 pg/ml to 2054±1221 pg/ml; p=ns; fig. 3) or relapsing (n. 7, from 1020±184 pg/ml to 1307±179 pg/ml; p=0.031; fig. 4). Longer follow-ups in a preliminary limited number of cases confirmed such results (Figures 5 to 7). In contrast, CgA levels showed conflicting changes. Metastatic patients displayed higher BLyS levels than non-metastatic ones (1282±657 pg/ml vs 1085±385 pg/ml; p=0.07).Conclusion. Elevated BLyS levels characterized more aggressive NET cases. BLyS appears as a new potential prognostic marker in the follow-up.

Nothing to Disclose: FG, MF, ET, DV, SP, GDM, MI, FC, FV, SM

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