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Langerhans cell histiocytosis: Review of the literature and a case study in an adult

Nilgün Katranci
Gazıantep University, Turkey

Langerhans cell histiocytosis (LCH) is a rare disease characterized with abnormal proliferation of histiocytes originated from bone marrow with an unknown etiology. It is usually seen in the pediatric age group and defined in three different ways as Eosinophilic Granuloma, Hand Schuller Christıan and Letterer-Siwe according to clinical and pathological characteristics. The disease can be local or systemic and involvement can be seen mostly in skin, bone, lymph nodes, lungs and central nervous systems. Men are affected more often than women. Its etiology is not yet known and it is still controversial whether it is a neoplastic process or an atypical immunological reaction. According to the studies conducted, the recent findings towards mutation of BRAF and MAP2K1 suggest that the disease has a neoplastic origin. It is reported that the diagnosis of LCH is sometimes difficult and it can be diagnosed lately or even be unnoticed in the adult population in particular. Although PET-BT application is useful in the diagnosis, it has been reported to be insufficient to establish a final diagnosis. There are not any symptoms, physical examinations or laboratory findings that are specific to the disease, and it is diagnosed by immunohistochemical analysis. The definitive diagnosis is obtained by showing the Langerhans cells stained with S-100 and CD1a antigen in the biopsy. It is reported that LCH is characterized by either a single or a large number of bone lesions and it can involve all the bones, especially the skull and it is mostly reported to be involved in pelvis and ribs. The diagnosis of Langerhans cell histiocytosis (LCH) is mostly seen in patients aged from 1 to 3, and seen as cases that are not well-diagnosed in adult patients. In this study, LCH diagnosis of a 37-years old patient, who was suffering from a severe pain in the thoracic spine for 2 years, and his treatment process is presented as a case. Although it is a rarely seen disease in adults, it should be kept in mind in the differential diagnosis of this disease and the number of cases should be increased in order to create a standard treatment procedure.

nilselgun@hotmail.com

The effect of chemotherapy-induced neuropathy symptoms on physical function and risk of falls in cancer patients received neurotoxic chemotherapy

Ping Wang and **Gary M Abrams**
University of California, USA

Objective: Chemotherapy-induced neuropathy (CIN) is a common adverse effect due to cancer treatment. Sensory and motor symptoms of CIN caused balance impairments and postural instability; however, the health outcomes of physical function and falls are not well studied. We quantified the effect of CIN symptoms on the occurrence of falls in patients received taxanes, platinum compounds or both, and compared physical function between patients with and without CIN.

Methods: The occurrence of falls, physical function, and psychological function were compared between patients with and without CIN. Adjusted logistic models were used to determine CIN symptoms that are associated with falls.

Results: Of the total 383 participants, 86.2% of participants developed CIN. For physical function, CIN patients had a lower score (33.1±6.8 vs. 35.2±6.0; p=0.02) assessed by Fullerton Advanced Balance (FAB) Scale, and a longer time (8.0±2.6 vs. 6.8±1.8; p<0.001) measured by the Timed Up and Go (TUG) test. 53.5% of patients reported falls since starting neurotoxic chemotherapy. The increased number (OR=1.74, 95% CI: 1.54-1.97) and each of CIN symptoms including numbness (OR=6.44, 95% CI: 3.42-12.14), tingling (OR=3.63, 95% CI: 2.04-6.46), sensitivity to cold temperatures (OR=2.19, 95% CI: 1.33-3.60), nerve pain (OR=2.01, 95% CI:1.25-3.26), muscle/joint aches (OR=2.95, 95% CI:1.79-4.87), muscle weakness (OR=7.72, 95% CI: 4.52-13.16) were significantly associated with falls (p<0.001).

Conclusion: Patients received neurotoxic chemotherapy in this cohort had normal physical function assessed by clinical measurements. But CIN symptoms were significantly associated with a higher risk of falls, which addresses the importance of assessing CIN and other cancer-related symptoms early to prevent falls and ensure patients' safety.

pwang@ucsf.edu