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Introduction: Erdheim-Chester disease (ECD) is a rare multisystemic disorder, classified as non-Langerhans histiocytosis according to WHO-2016. It is a malignant neoplasm derived from myeloid progenitor cells, particularly from monocytic/dendritic origin. Its actual incidence is unknown, and fewer than a thousand cases have been reported to date in the medical literature. Recurrent somatic mutations involving the *BRAF* gene (BRAF V600E) and other components of the *MAPK* signaling pathway play a central role in its oncogenesis. Although rare, cases in patients under 40 years-old are reported. Frequently the median age of ECD patients is around 50-60 years-old, with a predominance of males (3:1). The disease may have a polymorphic clinical presentation, usually involving bones, central nervous system (CNS), pituitary and peri-aortic or retroperitoneal fibrosis with ureteral stenosis. Several therapeutic options can be used to control the disease, including corticosteroids, radiotherapy, interferon-α, purine analogues (2Cda or DCF), mono/polychemotherapy, and targeted drugs such as vemurafenib and dabrafenib. **Objective:** To report one case of atypical presentation of ECD, manifested as acute obstructive abdomen in a patient under 20 years-old. **Case report:** An 18-year-old woman, with no previous comorbidities, sought medical service at the HC-FMUSP due to abdominal pain, abdominal distension, and stopping of the elimination of gases and feces. Abdominal ultrasound showed an extensive mass with a cystic/solid aspect in the pelvic region. Exploratory laparotomy revealed a large solid mass adhered to the wall of the small intestine and the lateral wall of the rectum. A 15-cm enterectomy, ileo-bowel anastomosis, protective distal colostomy and insertion of a double-J catheter into the urinary tract were performed. Histopathological examination revealed atypical cell proliferation with staining for CD68+, CD163+, Ki67+ (20-30%) on immunohistochemistry study. Molecular test in a sample fixed in formalin and embedded in paraffin (FFPE) revealed the presence of *BRAF* V600E mutation, confirming the diagnosis of ECD. She started therapy with cladribine (2-Cda) 5 mg/m^2, I.V., D1-D5, 30/30 days, for six cycles. After the end of chemotherapy, 18-FDG-PETCT was performed, compatible with complete metabolic response. She is currently asymptomatic and with an excellent quality of life. **Discussion and conclusion:** ECD is a rare disorder that can present with atypical extra-osseous symptoms. We describe here an unusual case of a patient outside the usual age range for this disease, with intra-abdominal manifestation and a case of bowel occlusion, requiring exploratory laparotomy and extensive surgical resection. As this is a classically relapsing disease, it is known that isolated surgical resection is often ineffective. Although it has a mutation that works as a target for specific therapeutic intervention (BRAF inhibitors), these drugs are unavailable in the context of the Brazilian Public Health System. Thus, our patient underwent conventional cytotoxic treatment, with manageable toxicity and excellent therapeutic response.

https://doi.org/10.1016/j.htct.2021.10.121

HIGH TOXICITY AND POOR SURVIVAL WITH ASSOCIATION CHOP PLUS ETOPOSIDE COMPARED TO CHOP REGIMEN IN 124 BRAZILIAN PATIENTS WITH NODAL PTCL LYMPHOMAS (NPTCL): A REAL-LIFE EXPERIENCE

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Introduction: Nodal-PTCL constitute a heterogeneous group of rare malignancies derived from mature T-lymphocytes. It presents aggressive clinical-biological behavior and distinct outcomes. These tumors have significant geographic variation, making important studies of clinical and epidemiological characteristics and outcomes of patients in specific areas of the word. Latin American data on nPTCL are scarce in the literature. Therefore, this study aims to describe clinical, laboratory and epidemiological characteristics, identify prognostic factors and analyze the outcomes of patients with nPTCL treated with CHOP-like regimens in Brazil. **Methods:** This is a retrospective, observational and unicentric study involving 124-Brazilian patients with nPTCL treated at HC–FMUSP from January 2000 to December 2017. All cases were submitted to centralized histopathological review and classified according to the criteria proposed by WHO-2016. OS and PFS curves were estimated by the Kaplan-Meier method. Univariate Cox analysis was used to determine factors with prognostic impact through the association between categorical variables and survival curves. Variables that were significant in the univariate analysis were tested in a multivariate analysis. P-values ≤ 0.05 were considered statistically significant. **Results:** With a median age of 48.5 years and 57.3% of male, about 81.5% had B-symptoms, 88.7% with CS III/IV and 58.1% had IPI ≥ 3. ORR to first-line treatment was 58.9%, 37.9% were treated with CHOP and 35.5% with CHOEP, 30.1% were submitted to radiotherapy and 32.3% were consolidated with ASCT. We observed a higher 2-year OS for patients treated with CHOP versus CHOEP (78.7% x 61.4%; $p = 0.05$), as well as a better 2-year PFS for the same regimen (69.7% x 25.0%; $p < 0.0001$). CHOEP treatment was associated with higher rates of G3-4 neutropenia, febrile neutropenia and G3-4 thrombocytopenia (57% x 88% $p = 0.001$, 38% x 70% $p = 0.003$ and 27% x 63% $p = 0.0007$, respectively). Overall mortality rate was 55.6%, with disease progression being the major cause of death. With a median follow-up of 23.7 months, medians of OS and PFS were 48.0 months (95% CI: 9.0-86.9) and 8.8 months (95% CI: 3.9-13.7), respectively. Estimative of 2-year OS and PFS for the global cohort were 61.3% and 41.5%, respectively. In the univariate analysis, factors with a favorable prognostic impact on OS were: IPI < 3 (HR: 0.30; $p < 0.0001$), absence of bone marrow infiltration (HR: 0.39; $p = 0.005$), LDH < 480 U/L (HR: 0.36; $p = 0.002$), radiotherapy (HR: 0.23; $p = 0.001$) and ASCT (HR: 0.28; $p < 0.0001$). Factors associated with better 2-year PFS were: IPI < 3 (HR: 0.36; $p = 0.004$), absence of bone marrow infiltration (HR: 0.30; $p = 0.03$), LDH < 480 U/L (HR:

0.36; p = 0.001), radiotherapy (HR: 0.17; p < 0.0001) and ASCT (HR: 0.03; p = 0.001). In the multivariate analysis, factors associated with better 2-year OS were: LDH < 480 U/L (HR: 0.40; p = 0.005) and ASCT (HR: 0.47; p = 0.003). LDH < 480 U/L (HR: 0.45; p = 0.01) and ASCT (HR: 0.07; p = 0.01) were also associated with higher 2-year PFS in our cohort. **Conclusion:** This is the largest real-life Latin American nPTCL cohort published to date. Patients with nPTCL have poor survival and high rate of chemo-resistance. In our cohort, adding etoposide to the CHOP regimen showed no survival benefit and was associated with high toxicity. Normal values of LDH and consolidation with ASCT were independent factors associated with better outcomes in Brazilian patients with nPTCL.

https://doi.org/10.1016/j.htct.2021.10.122

IMMUNE SENESCENCE-RELATED GENE EXPRESSION PROFILE IN CD4+ T-LYMPHOCYTES OF HTLV-1 ASYMPTOMATIC CARRIERS AND PATIENTS WITH ADULT T-CELL LEUKEMIA/LYMPHOMA (ATLL): A BRAZILIAN PRELIMINARY STUDY

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Introduction: ATLL is a rare and aggressive neoplasm caused by the human T-lymphotropic virus type 1 (HTLV-1). It is estimated that at least 5-10 million people carry HTLV-1 and 2-5% out of them will develop ATLL. Our group demonstrated an increase of cells in G0/G1 phase of cell cycle and aneuploidy in CD4+ T-cells in HTLV-1 asymptomatic carriers. These findings may reflect an adverse intracellular environment, caused by genetic stress due to viral particles inserted into host DNA. Intracellular mechanisms aiming to control and prevent replication of cells carrying genetic aberrations in genes involved in cell cycle regulation, DNA repair and apoptosis could be activated to hold cell division while DNA damage is repaired. Based on this hypothesis, delay of cell cycle in G0/G1 may be a step in the process of oncogenesis. Herein, we did a pilot study in order to analyze the pattern of expression of a set of genes involved in cell cycle control and senescence in CD4+ T-lymphocytes of HTLV-1 infected individuals searching for additional genetic abnormalities in this setting. **Methods:** Peripheral blood samples were tested obtained from five HTLV-1 asymptomatic carriers and four ATLL patients. T-CD4+ cells were isolated in magnetic column followed by RNA extraction. Subsequently, it was converted into cDNA for the assays of the qRT-PCR in microplates of 96 wells customized with 44 senescence related genes. A pool of five samples from healthy individuals (control group) was used as a calibrator. RNA transcription was measured using *7500 Fast real time PCR system* (*Applied Biosystems*) and data were collected by the *7500 software v2.0.5* (*Applied Biosystems*). The expression levels of the target genes were calculated using the Livak and Schmittgen (2001) method. The mRNA expression was normalized using the β-glucuronidase (*GUSB*) gene (*Applied Biosystems*, cod. Hs99999908_m1) and those genes with expression ≥ 2x or ≤ 2x in comparison to control group were considered as differentially expressed and were chosen to be validated in a secondary cohort of thirty HTLV-1 infected individuals. **Results:** In HTLV-1 asymptomatic carriers the median age was 55 years (37-62 years) and 20% (1/5) of them were males, in ATLL patients: 45 years (38-66 years) and 100% (4/4) were females, while the control group had median age of 43 years (22-62 years) and 60% (3/5) were males. Among the ATLL group, 50% (2/4) were classified as *smoldering*, 25% (1/4) were acute and 25% (1/4) were lymphomatous, according to Shimoyama classification. *COL3A1*, *SPARC* and *TWIST1* genes were overexpressed and *CDKN1A*, *ID1*, *IFNG* and *TERT* were suppressed in HTLV-1 asymptomatic carriers when compared to healthy controls. HTLV-1 infected and ATLL patients showed *TWIST1* and *COL3A1* genes overexpressed and *IFNG*, *CDKN1A* and *TERT* repressed. The *ALDH1*, *FN1*, *NOX4* and *COL1A1* genes did not amplified. **Conclusion:** These preliminaries results showed for the first time that HTLV-1 asymptomatic carriers present a set of genes differentially expressed in T-CD4+ cells, especially *SPARC*, *TWIST1*, *COL3A1*, *CDNK1A* and *IFNG*. These results will be confirmed in a validation cohort. We expected that this data shed some light on the comprehension of the cell microenvironment of the T-CD4+ lymphocyte in HTLV-1 asymptomatic carriers. Furthermore, we will be able to understand potential mechanisms associated with leukemogenesis in chronic infection by this virus, explaining eventual progression to ATLL.

https://doi.org/10.1016/j.htct.2021.10.123

INCIDÊNCIA E CARACTERIZAÇÃO CLÍNICA E MORFOLÓGICA DAS NEOPLASIAS LINFOPROLIFERATIVAS MALIGNAS EM PACIENTES COM TRANSMISSÃO VERTICAL DE HIV NO RIO DE JANEIRO NA ERA PÓS TERAPIA ANTIRRETROVIRAL COMBINADA (CART): UM ESTUDO MULTICÊNTRICO

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A terapia antirretroviral combinada (cART) tornou a infecção pelo HIV uma doença crônica. Na população pediátrica, mais de 95% das infecções ocorrem por transmissão vertical (TV). O CDC inclui alguns linfomas na categoria de doenças definidoras de AIDS. Crianças e adolescentes infectados pelo HIV apresentam risco 60 a 200 vezes maior de desenvolver malignidades, principalmente Linfomas não-Hodgkin (LNH). Antes da disseminação da cART, a incidência de malignidades em crianças e adolescentes infectados variou muito entre