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CLINICAL IMMUNOGENIC CHEMOTHERAPY IN REFRACTORY SARCOMA

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Background: There are several studies of the effects of the classic cancer cytotoxic chemotherapy used low doses but in animal models. With that in mind, we performed a systematic review to select at least four potential drugs and prepare dose-response and time-effect curves using cell lines from soft tissue sarcoma. We found the doxorubicin and oxaliplatin were cell lines. Also, we evaluated the able to kill a low dose tumor cells even chemoresistant potential activation of the adaptive immune cells and dendritic cells in fresh PMBC to make the ratio of killing tumor cells and activate simultaneously the CD8 and Th1 cells. Both drugs at low doses meaning immunogenic chemotherapy were able to kill tumor cells but also activate several cells of the immune system.

Methods: 10 patients with soft tissue sarcoma were treated with 20 mg total of doxorubicin and 30 mg total dose of oxaliplatin. These doses were selected in base in our *in vitro* studies. After the local IRB ethics committee, we treated the patients twice having as end point the granzyme production measured by granzyme B and by cytotoxicity assays measured the tumor cells death. We cultured the dendritic cells and we measured IL-12 as surrogate marker.

Results: 8/10 patients improved statistically significant the granzyme production against four recall antigens and 10 tumor-associated antigens after the month of treatment. The treatment was well tolerated, and we continued the treatment until tumor progression. With one month of treatment 60% of the patients undergo tumor reduction demonstrated by CT scan. Responder patients had high-production of granzyme against a cocktail of four tumor-associated antigens (p=0.005).

Discussion: Clinical immunogenic chemotherapy with doxorubicin and oxaliplatin was able to improve CD8 cells and some patients even in a month of treatment had tumor reductions. We decided to keep with the treatment until disease progression and we will add multi peptide immunotherapy and immunomodulation in a separate pilot protocol to see if we can improve clinical outcomes.

Biography

Pedro Alejandro Lucero Diaz was born and raised in Peru. He received his medical degree for the National University of San Marcos in Peru. Then he was trained in internal medicine and eventually in medical oncology the National Medical Center of Mexico in Mexico city (XXI century medical center) where he started clinical projects about the effects of cisplatin in magnesium. In 2002 he started a project in coordination with several oncologists in order to create a cancer research center, now named the Sonora Cancer Research Center in Seattle, Washington, United States and Ciudad Obregon, Sonora (CICS USA and CICS Sonora). Since then he has been presented and published several clinically relevant data in ovarian, TNBC, inflammatory breast cancer and refractory tumors such as sarcoma. Dr. Pedro Lucero is now in charge of academic program named CancerVac as co-director, which the mail goal is to prepare the future medical oncologist, hematologists, pathologist oncologists and pediatric oncologist with strong background in both clinical and scientific areas.

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