Neoadjuvant pertuzumab in non-metastatic HER2-positive breast tumors: Multicentric study in Peru (NeoHer)

Pertuzumab neoadyuvante en tumores de mama HER2 positivos no metastásicos: Estudio multicéntrico en Perú (NeoHer)

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TIPO DE CANCER: Mamas y tejidos blandos

ABSTRACTO: Several clinical trials have demonstrated the benefit of adding pertuzumab to trastuzumab plus neoadjuvant chemotherapy in the treatment of human epidermal growth factor receptor 2 (HER2)-positive breast cancer. The comparison of outcomes between nonrandomized groups of patients who received similar treatments in routine practice remains difficult. The present study aimed to evaluate the pathological complete response (pCR) rates achieved with pertuzumab among patients in routine clinical care in Peru using real-world data. The definition of pCR used was the absence of residual invasive cancer from the complete resected breast specimen and all sampled regional lymph nodes following completion of neoadjuvant systemic therapy. A total of 44 patients with non-metastatic HER2-positive breast cancer (stages II and III) treated with pertuzumab in the neoadjuvant setting and who underwent surgery at three private clinics in Lima (Peru) were retrospectively evaluated. The pCR was the efficacy endpoint and it was determined and compared with the results from other clinical trials. Furthermore, safety data were described. The median age was 44 years (interquartile range, 39.5-50.5 years) and 65.9% of patients were premenopausal. Regarding the clinical stage, 56.8% were IIA/IIB and 36.4% were IIIA/IIIB/IIIC. All treatment schemes included concurrent trastuzumab. The patients' treatment comprised neoadjuvant therapy of docetaxel/trastuzumab/pertuzumab (THP) with a median of 4 cycles in 30 patients (68.2%) or docetaxel/trastuzumab/pertuzumab/carboplatin (THPCarb) with a median of 6 cycles in 14 patients (31.8%). In total, 70.5% of patients experienced pCR; among hormone receptor-negative cases, 75.0% achieved pCR and in tumors expressing hormone receptors, the rate of pCR was 66.7%. Of those patients subjected to neoadjuvant treatment with THP, 66.7% (20/30) achieved pCR, whereas 78.6% (11/14) of patients who received THPCarb had a pCR. The incidence of drug-related adverse events was 59.1% and in none of the patients, administration was discontinued due to toxicity. The present results of Peruvian patients with HER2 breast cancer treated according to clinical routine demonstrated that dual blockade of HER2 with trastuzumab and pertuzumab in the neoadjuvant setting achieved high rates of pCR even in hormone receptor-positive patients. These results are consistent with those of randomized controlled trials, with a good safety profile.

Immunotherapy in triple-negative breast cancer: A literature review and new advances

Inmunoterapia en el cáncer de mama triple negativo: revisión de la literatura y nuevos avances

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TIPO DE CANCER: Mamas y tejidos blandos

ABSTRACTO: Triple-negative breast cancer (TNBC) is a highly complex, heterogeneous disease and historically has limited treatment options. It has a high probability of disease recurrence and rapid disease progression despite adequate systemic treatment. Immunotherapy has emerged as an important alternative in the management of this malignancy, showing an impact on progression-free survival and overall survival in selected populations. In this review we focused on immunotherapy and its current relevance in the management of TNBC, including various scenarios (metastatic and early -neoadjuvant, adjuvant-), new advances in this subtype and the research of potential predictive biomarkers of response to treatment.

Human Papillomavirus, Cytomegalovirus Infection and P16 Staining in Breast Tumors from Peruvian Women

Virus del papiloma humano, infección por citomegalovirus y tinción de P16 en tumores de mama de mujeres peruanas

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TIPO DE CÁNCER: Mamas y tejidos blandos

ABSTRACTO: Objective: To evaluate the frequency distribution of viral infections in Peruvian Breast Cancer (BC) lesions and its association with clinicopathological features. Additionally, a prospective evaluation of p16 and Tumor-infiltrating lymphocytes (TIL) levels were performed for developing a comprehensive analysis. Methods: Detection of high risk- human papillomavirus (HR- HPV) through qPCR was performed in 447 BC and 79 non-cancer frozen samples. Paired paraffin samples from 238 BC were stained with Human cytomegalovirus (HCMV) and p16 immunohistochemistry. TIL was calculated in 397 BC cases. Results: HCMV was positive in 72.5%. HR- HPV was detected in 2.9% of BC and 1.3% of non-malignant samples. P16+ was found in 28.15% and median TIL percentage was 30. HR- HPV infection was associated with non-ductal histology (p=0.003) and p16+ (p=0.017). Positive P16+ was associated with higher T stage (p=0.022), grade (p=0.009), TIL level (p=0.002), and triple-negative phenotype (p=0.021). Conclusion: HCMV is frequent, but HR- HPV infection is unusual in Peruvian BC. P16+ is associated with HR- PVH infection, high TIL and aggressive features.

Association between ancestry-specific 6q25 variants and breast cancer subtypes in Peruvian women

Asociación entre variantes 6q25 específicas de ascendencia y subtipos de cáncer de mama en mujeres peruanas

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REVISTA: Cancer Epidemiol Biomarkers Prev 2022 Jun 2;cebp.EPI-22-0069-A.2022-1-20 15:23:11.350. doi: 10.1158/1055-9965.EPI-22-0069. Online ahead of print.

TIPO DE CÁNCER: MAMAS Y TEJIDOS BLANDOS

ABSTRACTO: Background: Breast cancer incidence in the United States is lower in Hispanic/Latina compared to African American/Black or Non-Hispanic White women. An Indigenous American breast cancer protective germline variant (rs140068132) has been reported near the Estrogen Receptor 1 gene. This study tests the association of rs140068132 and other polymorphisms in the 6q25 region with subtype-specific breast cancer risk in Hispanic/Latinas of high Indigenous American ancestry. Methods: Genotypes were obtained for 5,094 Peruvian women with (1,755) and without (3,337) breast cancer. Associations between genotype and overall and subtype-specific risk for the protective variant were tested using logistic regression models and conditional analyses including other risk-associated polymorphisms in the region. Results: We replicated the reported association between rs140068132 and breast cancer risk overall (odds ratio (OR)=0.53, 95%CI=0.47-0.59), as well as the lower odds of developing hormone receptor negative (HR-) vs. HR+ disease (OR=0.77, 95%CI=0.61-0.97). Models including Human Epidermal Growth Factor Receptor 2 (HER2) showed further heterogeneity with reduced odds for HR+HER2+ (OR=0.68, 95%CI=0.51-0.92), HR-HER2+ (OR=0.63, 95%CI 0.44-0.90) and HR-HER2- (OR=0.77, 95%CI=0.56-1.05) compared to HR+HER2-. Inclusion of other risk-associated variants did not change these observations. Conclusion: The rs140068132 polymorphism is associated with decreased risk of breast cancer in Peruvians and is more protective against HR- and HER2+ diseases independently of other breast cancer-associated variants in the 6q25 region. Impact: These results could inform functional analyses to understand the mechanism by which rs140068132-G reduces risk of breast cancer development in a subtype-specific manner. They also illustrate the importance of including diverse individuals in genetic studies.

Clinicopathological Features and Mortality in Patients With Kaposi Sarcoma and HIV: A Retrospective Analysis of a Thirty-Year Study From a Peruvian Oncologic Center

Características clinicopatológicas y mortalidad en pacientes con sarcoma de Kaposi y VIH: un análisis retrospectivo de un estudio de 30 años de un centro oncológico peruano

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TIPO DE CÁNCER: Mamas y tejidos blandos

ABSTRACTO: Purpose: Kaposi's sarcoma (KS) is a multifocal angioproliferative disease. In Peru, the implementation of the highly active antiretroviral treatment (HAART) program was in 2005, the model for treating patients with HIV-positive KS shifted to a potential cure. In this study, we aim to compare clinicopathological characteristics and prognostic factors associated with outcomes in patients with HIV-positive KS. Methods: We developed a retrospective cohort study that includes patients with HIV/AIDS and KS seen in the Instituto Nacional de Enfermedades Neoplasicas between 1987 and 2017. Patients were divided into two groups according to the implementation of HAART in our country: the non-HAART group and those treated with HAART after 2005. Multivariate analysis for overall survival (OS) was performed with the Cox proportional hazard regression model. Results: There was a greater visceral compromise and more extensive oral cavity involvement in the non-HAART group (60% 31.7%, P < .01). Regarding the immune status, there was a significant difference from the CD4 count at 1-year follow-up (73 v 335, P = .01). The CD4/CD8 rate were significant different before QT (0.23 v 0.13, P = .01) and at 1-year follow-up (0.12 v 0.32, P = .03.). The estimated 5-year OS rate was significantly lower (P = .0001) for the non-HAART group (41.7%; 95% CI, 25.9 to 56.9) compared with the HAART group (79.3%; 95% CI, 66.8 to 87.5). In the multivariate model for OS, full-HAART regimen and previous diagnosis of HIV/AIDS (P < .01) were significantly associated with longer survival. Conclusion: Clinical and demographic characteristics of our patients are compatible with the literature, but we report a higher rate of gastrointestinal involvement. Furthermore, our findings provide evidence for the importance of HAART and its ability to reduce KS-related mortality