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The impact of HIV and chronic immunosuppression on treatment response, toxicity and survival of patients with locally advanced anal canal cancer: a 16-year single-institutional analysis

Abstract: Anal canal cancer (ACC) is an uncommon neoplasm, closely related to human papillomavirus infection (HPV). Coinfection with HIV and HPV predisposes development of ACC and, along with chronic immunosuppression (CI) is associated with greater toxicity and compromised response to chemoradiotherapy (CRT). The current standard-of-care treatment, for locally advanced stages, prioritizes CRT with a dose >50Gy associated with mitomycin C and fluoropyrimidines, aiming organ preservation, resulting in excellent oncological results. With the goal of understanding the impact of HPV/HIV/CI, a cohort of 65 patients diagnosed over a 16-year time period with locally advanced anal carcinoma who underwent CRT was collected and carefully characterized at the clinical, demographic, histopathologic and virologic levels. Overall, patients median age was 62 years, mostly female (64.6%) with ECOG PS0-1 of 92.3%; 5 stage I; 32 stage II and 28 stage III. Fourteen were HPV+, 14 were HIV+, 2 had ulcerative colitis and 1 had Sjögren's syndrome. All completed treatment. Skin toxicity was the most common with 80.6% presenting radiodermatitis $\geq$ G2 at last week of treatment; 4.7% with G3-4 gastrointestinal toxicity and 54.7% with G1-2 genitourinary toxicity. At 4 years, the overall survival (OS), OS for immunocompetent and HIV/CI OS was 66.5%, 73.4% and 48.6% respectively. PFS, immunocompetent PFS and HIV/CI PFS was 95.4%, 96.2% and 87.5% respectively. The presence of HIV/CI didn't show an impact on OS, PFS or toxicity, however, was associated with a lower complete response to treatment ($p=0.04$). Taken together, our findings reveal relationship between the presence of HIV/CI and decreased complete response to treatment. Introduction of antiretroviral therapy may explain the better oncological control; on the other hand, conformal radiotherapy techniques seem to be correlated with lower toxicity observed.

Keywords: HPV; HIV; Chronic immunosuppression; Anal canal cancer

Biography: Catarina van der Elzen is an enthusiastic third-year radiation oncology resident at the Department of Radiation Oncology of Unidade Local de Saúde São João. Trained medical doctor at the Faculty of Medicine of the University of Coimbra, also accomplished a postgraduate degree on Human Sexuality at the Faculty of Medicine of the University of Lisbon. Member of the European Society for Medical Oncology and European Society for Radiotherapy and Oncology, she's author and co-author of several clinical researches carried out and presented at national and international congresses. Her research has focused on oncology, with a deep interest in digestive cancers.