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LETTER TO THE EDITOR

Association of Schistosomiasis with Cervical Cancer in Togo: the Consequence of this Association

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Abstract Objective of the study was to determine the association of cervical cancer association and schistosomiasis infection. We conducted a retrospective and descriptive study of cases of cervical cancer and identified cases associated with schistosomiasis. A total of 1027 cases of cervical cancer were collected, and 19 cases revealed an association with schistosomiasis. This association was mainly related to squamous carcinoma with 18/19 cases. All patients were from rural areas. Of the 19 cases of association, 17 cases showed signs of HPV infection. Our data show a high degree of HPV infection that causes cervical cancer and not schistosomiasis.

Keywords Cervical cancer · Schistosomiasis · Carcinoma · HPV · Togo

Introduction

According to the WHO, cancer will be the 3rd leading cause of death in Africa in 2020 [1]. Schistosomiasis is a major endemic parasitic disease in the tropical world [1]. Schistosomiasis infestation leads to persistent chronic inflammation and produces a carcinogenic enzyme: beta-glucuronidase [2]. The association of schistosomiasis and bladder cancer is well known and widely documented in the literature [2]. The objective is whether this association of causality could be observed in the cervix.

Methods

We report the results of a retrospective and descriptive study of all cases of cervical cancers diagnosed from 2000 to 2016 (17 years) in Togo only pathological anatomy laboratory. From these cases of cervical cancers, we have identified cases associated with schistosomiasis. These cases were collected from the registers of the laboratory. The study material consisted of biopsies and surgical specimens fixed in 10% formalin and from various health facilities in Togo.

Results

In total, 1027 cases of cervical cancers were collected, accounting for 16.4% (6255 cases) of all diagnosed cancers. The mean age of the patients was 41.9 years. We observed 19 cases of cervical cancers associated with schistosomiasis. Of these 19 cases of cancer associated with schistosomiasis, 17 cases also showed signs of HPV. Signs of HPV were represented by the koilocytes. The nineteen patients who presented this combination of cancer and schistosomiasis all came from rural areas. Their reason for consultation consisted of: hematuria (14/19 cases), pelvic pain (4/19cases), infection (1/19cases). The histological types of associated cervical cancers were: infiltrating squamous carcinoma (13 cases), squamous carcinoma in situ (4 cases) and 1 case of adenocarcinoma. The histological diagnosis of schistosomiasis was made in

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11 cases on the detection of eggs often calcified and in 8 cases by the bilharzian granuloma.

Discussion

Cervical cancer was the second cancer of women in Togo behind breast cancer. The originality of this study was to report schistosomiasis as a probable viral cofactor of cervico-uterine cancers. Bilharziasis causes chronic inflammation and ulceration of the cervix with bilharzial granuloma [3]. This ulcerated cervicitis can make the bed or increase the virulence of a human papillomavirus infection [1]. Cancer associated with schistosomiasis accounted for 0.2% of all cases of cervical-uterine cancers according to the literature [1]. At the same time, nineteen cases of bilharzias cervical localization were found during the study period. It was mainly squamous carcinoma. The histological forms described were at the level of the uterine body: one case of adenosarcoma and one case of endometrioid adenocarcinoma in the kidney: two cases of clear cell adenocarcinoma, one case of collector tube carcinoma and one case of nephroblastoma And in the prostate, two cases of acinar adenocarcinoma [2, 4]. Our figures are probably underestimated in relation to the actual prevalence of bilharziasis in Togo, but they represent all the cases of cervical bilharziasis of histological diagnosis over the last 17 years. The association rates found in our series seems too low to retain certain causality between bilharziasis and cancer. The tumor is likely to invade secondary organs already infested or eggs may embolize preexisting tumor tissue [4]. Bilharziasis poses the problem of access to water and is responsible for complications yet avoidable [4]. In the absence of vaccination, which is encouraging in its ongoing work, prevention will require public health education.

In addition, epidemiological analysis indicates that the occurrence of cancer infection and schistosomiasis of the cervix is not strictly limited to the population of rural areas known as endemic areas with norms Unhygienic and socio-economic [5]. Praziquentel is almost the ideal antibilharzian, the only active agent on all varieties of schistosomiasis. The treatment of definitive lesions is surgical [3, 5]. The mass treatment of populations by praziquental is used in the field. But it also uses selective chemotherapy to treat only egg-emitting subjects.

Conclusion

This study on the association of cervical cancer and schistosomiasis reveals a high degree of HPV infection. Perhaps it is HPV and not schistosomiasis that would be responsible for the development of cervical cancer. Our data do not support the hypothesis of an etiologic role of schistosomiasis in cervical oncogenesis.

Compliance with Ethical Standards

Conflict of Interest The authors report no conflict of interest.

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