

Extensive Condylomata with Malignant Transformation Complicated by Compounding Socioeconomic Barriers

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Abstract

Presentation

This case reports a forty-four year old male who presented with a two-year worsening perianal condylomata which was concerning for malignant transformation. He had no significant risk factors but had reduced engagement with healthcare service.

Diagnosis

Radiological workup revealed an extensive locally invasive tumor with no distant metastases. Histology demonstrated high grade anal intraepithelial neoplasia (HGAIN). There were no surgical or systemic treatment options due to the extent of disease and absence of invasive disease on histology.

Treatment

He absconded from care for a six-month period. On representation his clinical status had deteriorated. Repeat histology confirmed invasive squamous cell carcinoma (SCC). He did not receive anti-cancer treatment but had specialized palliative care. He died within two months.

Discussion

This case demonstrates the awareness needed in regards to Anal Intraepithelial Neoplasia (AIN) and possible malignant transformation. This case also highlights that lack of healthcare engagement can hinder time-sensitive monitoring and treatment which may lead to significant progression of disease.

Introduction

Human Papillomavirus (HPV) infection presents in various manners, with most clearing within two years¹. However, there is risk of malignant transformation in benign HPV infections². The decisive factors allowing establishment of persistent HPV infection are unknown.

International guidelines recommend AIN screening for at-risk population³, considering the success of cervical screening programmes. However, there are limitations to AIN screening.

Case Report

A forty-four year old male presented with a worsening perianal condylomata. He had no comorbidities. He was a smoker with a 30-pack year history and significant alcohol consumption, with 140 units a week. He had lost 25 kg in the past two years. There was no family history of malignancy. He was not sexually active and denied previous sexual intercourse with men.

His BMI was 16. Upon examination, there was a large, extremely tender, ulcerating, malodorous condylomatous mass covering the majority of his perianal and bilateral buttock area including his perineum and medial thigh area. The condylomata was concerning for malignant transformation.

He was significantly anaemic; with a haemoglobin of three g/dl. Blood-borne virus and syphilis screen were negative. PCR swabs for varicella and herpes zoster were negative. Radiological workup revealed an extensive locally invasive tumor with no distant metastases.

He underwent a defunctioning loop ileostomy. Histology demonstrated high grade AIN (HGAIN). This case was discussed at the colorectal multidisciplinary meeting (MDM) locally. There was no surgical treatment option as the extent of disease was deemed unresectable. There was no systemic treatment as well due to non-histologic confirmation of invasive disease.

He absconded from care for a six-month period. He represented with a clinical deterioration in his status. Repeat imaging showed local progression of disease. Repeat histology confirmed invasive SCC. He was too frail at this point for systemic therapy. He declined rapidly and received specialized palliative care. He died in two months.

Discussion

Condylomata acuminata (CA) are due to HPV infection of benign subtype. This patient had no significant risk factors for malignant transformation. However, his significant alcohol consumption potentially predisposed him to a degree of immunosuppression. Alcohol has been shown to have an effect on the innate and adaptive immune responses, promoting pro-inflammatory response and impairing anti-inflammatory cytokines⁴. This effect usually becomes clinically relevant after a secondary insult (bacterial or viral infection or tissue damage).

There has been evidence showing that benign HPV subtypes can initiate a growth process that can develop into a malignant phenotype due to chronic epithelial irritation, promoting co-infection of different HPV subtypes⁵. The chronic inflammatory immune response also plays a contributing role in malignant transformation by providing a prerequisite environment for the development of malignancy - which includes upregulation of production of inflammatory cytokines, inducing cell proliferation and production of reactive oxygen species and metabolites⁶.

In this patient, he only presented to a healthcare setting after two years. The condylomata was persistently irritated. The persistence of the condylomata, possibly led to harboring of various HPV subtypes, including oncogenic types. This would contribute to development of a malignant phenotype. This factor, compounding with subclinical immunosuppression secondary to significant alcoholism would have contributed to development of a malignant transformation.

HPV infection is a risk factor for AIN. HGAIN is considered a precursor for invasive anal SCC. Regression of HGAIN is very rare. International guidelines recommend annual screening for 'high-risk' population³. This patient did not meet criteria for screening. However, his self-neglect and reduced healthcare engagement hindered timely monitoring which prevented time-sensitive intervention, leading to progression of disease.

At present, cure for HGAIN is radical excision or topical therapy. Systemic treatment outcomes for metastatic SCC remain poor, thus prevention of anal SCC holds the best potential for reducing disease burden. AIN has high recurrence rates post-treatment, complicating screening programmes⁵. The accuracy for anal cytological screening is poor⁷. These issues remain a barrier for a successful AIN screening program.

This case emphasizes the importance of advocating for patients to engage with healthcare services. It also demonstrates that there is still a lack of screening programmes in Ireland for HPV

in men, particularly outside of high-risk population. When multiple factors compound (lack of patient engagement, subclinical lack of AIN screening programme), it can lead to serious consequences in HPV infection, i.e. death in this case.

Declarations of Conflicts of Interest:

None declared.

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