PROLIFERATIVE VERRUCOUS LEUKOPLAKIA: RARE BUT LETHAL

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ABSTRACT

Objective: Proliferative verrucous leukoplakia (PVL) is a rare, recalcitrant, and lethal form of leukoplakia necessitating special attention. The purpose of this review is to characterize risk factors, clinical course, and optimal treatment for this highly aggressive, pre-malignant lesion.

Method: A retrospective review all PVL cases treated at Wilford Hall Medical Center from 1985 to 2010. Data was pooled with PVL cases identified following systemic review of the English literature. Only articles addressing epidemiology, histopathology, treatment outcomes, and malignant progression were pooled and analyzed using descriptive statistics.

Results: 243 PVL cases met inclusion criteria. Mean patient age was 66 years. The majority of the patients were female (72%) and nonsmokers (64.6%). HPV was not an associated risk factor. Mean follow-up was 7.6 years, with an average of 10.7 biopsies per patient during this period. PVL exhibits histopathologic features along a progressive spectrum, evolving from leukoplakia and verrucous hyperplasia to invasive carcinoma. Rate of malignant progression was 63.8%. Definitive treatment was rarely successful, with recurrence rates reaching 85%.

Conclusion: PVL is a rare but recalcitrant form of leukoplakia with a high malignant transformation rate. It warrants high clinical suspicion, to include a lifetime of close follow-up by a physician well versed in oral carcinoma. Repeat biopsy should be considered an integral part of this routine follow-up.

BACKGROUND

• PVL is a unique, lethal variant of leukoplakia demonstrating a high rate of progression to oral squamous cell carcinoma (SCC) and verrucous carcinoma. It was first described in the literature in 1985.
• PVL is rare, leading to a paucity of literature regarding disease progression and optimal management.
• It remains a diagnostic challenge due to the spectrum of histologic presentations required for diagnosis.
• Given the aggressive and lethal behavior of PVL, all providers specializing in oral pathology must be aware this variant of leukoplakia which warrants vigilant management.

METHODS

• A retrospective cohort study was performed to identify all PVL cases treated at Wilford Hall Medical Center (WHMC) from 1985 to 2010.
• An English-language systematic review was conducted using OVID and PubMed database searches to identify PVL studies with the following inclusion criteria: PVL disease characteristics, histopathology, treatment outcomes, and progression to malignant disease. Search terms included PVL, verrucous, hyperplasia, hyperkeratosis, and oral SCC.
• Outcome measures included patient demographics, tumor site, disease progression, number of biopsies, and recurrence.
• Data was pooled, weighted and analyzed using descriptive statistics.

RESULTS

• 8 articles met inclusion criteria and one additional patient received treatment at WHMC for a total of 243 PVL patients.
• This review marks the largest PVL study to date.
• Patient demographics and outcomes are summarized in Table 1.
• HPV was not identified as an associated risk factor.
• PVL presents clinically as a diffuse, homogenous, intratusal plaque that becomes more erythematous and exophytic over time (Figure 1).
• Average lifetime biopsy/patient: 10.65.
• PVL progression to carcinoma: 63.8% (155/243).
• Recurrence rate in treated PVL pts: 85% (212/243).

DISCUSSION

• PVL is a rare and lethal form of leukoplakia in which 64% of lesions progress to invasive carcinoma.
• Despite aggressive management to include surgery, laser treatment, and radiation, 85% of treated PVL patients will developing recurrence.
• It is important to realize that PVL demographics differ from traditional SCC in that the majority of the patients are female and non-smokers.
• High clinical suspicion, early diagnosis, aggressive primary intervention, and a lifetime of close surveillance to include biopsy of any suspicious lesion is imperative in the management of PVL.
• Given the aggressive and lethal behavior of PVL, all providers treating oral pathology must be aware of this potential diagnosis and maintain a high clinical suspicion beyond that of traditional leukoplakia.

REFERENCES