Vaginal Cancer Treatment Patterns and its Associated Disparities

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Introduction

Cancer of the vagina is a rare gynecologic disease with most cases treated with surgery and radiation. Randomized control trials are very difficult to perform and treatment is often extrapolated from vulvar and cervical cancer. Little is known regarding systemic cytotoxic chemotherapy in this cancer.

Health disparities have been reported in other Gynecologic cancers with cervical cancer strongly associated with a lower socioeconomic class. Racial disparities have been reported though out healthcare, not excluding oncologic care. Little has been reported regarding the treatment disparities of vaginal cancer.

The patterns of practice have changed throughout time with radiation taking favor over surgical resection of local disease. Given the anatomy, surgical resection is usually radical, giving radiation a less morbid profile. In addition, advancements of radiation techniques such as intensity modulated radiotherapy (IMRT) and chemoradiation make this treatment arm favorable.

Objective

• The objective is to explore the patterns of practice in the treatment of vaginal cancer and its associated disparities.

Methods

• After IRB (Institutional Review Board) approval, the SEER (Surveillance, Epidemiology, and End Results) Database was obtained and queried for cancer of the vagina from 1988 to 2013. Clinicopathologic specifics were obtained including age, race, stage, histology, treatment modalities, survivals, and derived median income. Treatments arms were separated by surgery, radiation, both, or none. Kaplan-Meier Survival Analysis was performed stratifying patients by treatment (surgery, radiation, and both) or no treatment. A multivariate analysis was then performed using age, race, stage, derived median income, to identify patients at risk of going untreated.

Results

A total of 3,752 patients were identified between 1988 and 2012. Forty percent were Stage I, 24% Stage II, 16% Stage III, and 20% Stage IV. Seventy-nine percent were White, 14% were African-American, and 7% other. Seventy-four percent were of squamous histology while 26% were otherwise. The median age at diagnosis was 66. Fifteen percent of patients were treated with surgery, 50.3% with radiation, 20.1% with both, and 13.9% remained untreated. The treatment groups were broken down by year to analyze treatment trends (Figure 1). The median survival in months was 131 (95% Confidence Interval; 115.1-146.9) for those who were treated, compared to 33 (95% Confidence Interval; 16-50) for those who were not treated. A multivariate analysis was used to identify those at risk for going untreated, identifying African-Americans when compared to Whites (OR 0.7; p=0.008), Stage IV compared to Stage I (OR 0.5; p<0.001), and those with ages 70-79 when compared to those under 50 (OR 0.57; p=0.001) and ≥80 (OR 0.45; p<0.001). Derived median income was not of statistical significance.

Conclusion

In conclusion, the practice patterns of vaginal cancer were investigated using a national cancer database. While the majority of patients are being treated with surgery, radiation, or both, an increasing percentage of patients go without treatment. Untreated patients have a worse survival. Patients that are less likely to be treated are African-American, elderly, and with advanced stage. Further investigation is necessary to identify the reasons patients go untreated.

References