Superficial versus deep lymph node dissection in early stage vulvar carcinoma

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Keywords: Squamous cell carcinoma of vulva, lymph node dissection, lymphadenectomy

Objectives: Our primary objective was to evaluate the difference in overall survival, recurrence rate, and post-operative morbidity related to superficial versus deep inguinal lymphadenectomy in squamous cell carcinoma of the vulva.

Methods: A retrospective cohort of 167 patients with squamous cell carcinoma of the vulva who underwent an inguinal lymph node dissection at the University of Iowa Hospitals and Clinics in Iowa City, IA or Women’s and Infants Health in Providence, RI from 1999 to 2017 was analyzed. Data was collected on a total of 280 groins. Demographic, surgical, recurrence, survival, and post-operative morbidity data were collected. Chi Squared and Fisher’s exact tests were used in comparison analysis and Kaplan-Meier curves were used to analyze survival and recurrence data.

Results: For patients who received inguinal lymph node dissections, 182/280 (65%) of groin dissections were deep and 98/280 (35%) were superficial. There was no difference in overall survival between patients who received a deep and superficial lymph node dissection (p=0.76). A difference in
Recurrences rates was not evidenced between deep and superficial nodal dissection, in particular, inguinal recurrence rates were similar (5.6 vs 1.7%, P=0.42). A significant difference in the rate of overall post-operative morbidity was found between deep (74.5%) and superficial (54.2%) nodal dissection (p=0.01). Rates of lymphedema (44.9 vs 22.9%, p=0.01), readmission (27.6 vs 6.3%, p<0.01), and infection (41.8 vs 25.0, p=0.05) were all significantly higher among patients undergoing deep nodal dissection.

**Conclusions:** Superficial inguinal lymph node dissection had no significant difference in rate of recurrence or overall survival when compared to deep inguinal lymph node dissection in patients with squamous cell carcinoma of the vulva. However, those who received a deep vs superficial nodal dissection had a significant increase in overall morbidity, including lymphedema, readmission, and infection. Therefore, it is reasonable to conclude, that for patients who cannot undergo or fail sentinel lymph node mapping, a superficial inguinal lymph node dissection has similar outcomes in recurrence and overall survival with a reduction in overall morbidity as compared to a complete, or deep, lymph node dissection.

*Presented at “Complicated Maternal Fetal Medicine Cases,” the University of Iowa Carver College of Medicine Ob/Gyn Postgraduate Conference, 2 November 2018, Hilton Garden Inn, Iowa City, Iowa.*