Panniculectomy with Simultaneous Ventral Hernia Repair: A Retrospective Analysis of Surgical Outcomes

Johnathan Shih, BS; Gabriel Klein, MD; Andrew Peredo, MD; Jie Yang, PhD; Jianjin Xu, MS; Sami U. Khan, MD

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Background:
Panniculectomy (PAN) and ventral hernia repair (VHR) are major procedures that carry significant risk. In cases where both surgeries are indicated, there is limited evidence that addresses the safety of performing the two simultaneously. In this study, we investigated clinical outcomes associated with PAN and PAN with concomitant VHR over an eight-year period at a single institution.

Methods:
We used CPT codes to retrieve charts for patients who underwent panniculectomy from 2007-2014. Charts were reviewed for patient characteristics, hospital course, post-operative complications, and hospital readmissions. Chi-squared tests were used to compare unadjusted marginal differences for categorical variables, and Wilcoxon rank sum tests were used to compare continuous variables.

Results:
58 patients underwent PAN alone and 41 underwent PAN+VHR. Cohorts were similar with a mean age of 46 and a mean BMI of 33.0. 13% of patients endorsed a current smoking history, and 52% had prior bariatric surgery. Mean length of follow-up was 7 and 15 months, respectively (p=0.23). PAN+VHR patients had an increased risk of cellulitis compared to PAN alone patients (29.3% vs. 10.2%; p=0.02), although risk of overall wound-related events was not increased (p=0.22). There was no significant difference in the risk of infection (p=0.56), dehiscence (p=0.13), seroma (p=1.00), or skin necrosis (p=0.16). PAN+VHR patients had an increased risk of related emergency room (ER) visit within 1 year of discharge (p=0.03), but risk of readmission within the same time frame was not increased (p=0.25). Among patients who underwent PAN+VHR, hernia size ≥16cm^2 was associated with an increased risk of 1-year ER visit (p=0.01) and hospital readmission (p=0.02). Additionally, PAN+VHR patients who underwent mesh repair had an increased risk of post-operative complication (p=0.02) and readmission (p=0.04).

Conclusions:
In our study, patients who underwent PAN+VHR had an increased risk of cellulitis and related ER visit compared to patients who underwent PAN alone. While this discrepancy in outcomes certainly warrants consideration when evaluating patients for surgical candidacy, one must note that the magnitude of risk imparted by simultaneous VHR depends on individual comorbidities as well as hernia-specific characteristics such as size and complexity. Further investigations to include outcomes following VHR alone are indicated to evaluate the extent to which our findings might be attributed to VHR alone.