Impact of gender on femoral access complications secondary to application of a collagen-based vascular closure device.

Authors: Eggebrecht H, von Birgelen C, Naber C, Kroger K, Schmermund A, Wieneke H, Bartel T, Wortgen U, Baumgart D, Haude M, Erbel R

Publication Date: 2004

Abstract:

BACKGROUND: Vascular complications at the femoral access site continue to be a significant problem after cardiac catheterization procedures. It was the aim of the present study to assess the impact of gender on the incidence of severe femoral access complications following the application of a collagen-based vascular closure device after transfemoral catheterization procedures.

METHODS: A total of 1,294 consecutive patients (977 male, 317 female) underwent closure of femoral access sites with 8F collagen-based vascular closure devices (Angioseal) immediately after diagnostic or interventional coronary catheterization procedures, independently of the coagulation status. All patients were closely monitored for the occurrence of complications during the following 24 hours.

RESULTS: Between male and female patients, there was no difference in the technical performance of the device with successful deployment being achieved in 96.7% and 95.9%, respectively (p=0.60). Severe access complications were found to be significantly higher in female versus male patients (1.6% vs. 0.2%; Odds ratio 7.7, 95% confidence interval 1.5-40.1; p=0.015), although similar accomplishment of an immediate hemostasis was seen in 92.8% and 92.4% of male and female patients (p=0.98).

CONCLUSION: Women show a significantly increased risk of developing severe femoral access complications secondary to the application of a collagen-based vascular closure device, although the overall incidence of these complications is relatively low. We speculate that the increased risk in women may be related to smaller arterial dimensions, which could be evaluated by femoral angiography prior to deployment of a closure device.