"This study was conducted to survey induration incidence and risk factors, and investigation for actual condition of induration" Abe-Do et al (2020).

Abstract:

AIMS: Following chemotherapy, induration may occur. This study was conducted to survey induration incidence and risk factors, and investigation for actual condition of induration.

METHODS: A cohort study was conducted for survey of incidence and risk factors, and a cross-sectional observation study was conducted to examine actual condition of induration. The sites of chemotherapy administration were recorded, and these were observed on the next treatment day. Clinical nurses judged the presence or absence of induration by palpation. The sites were observed using ultrasonography. To investigate the risk factors associated with the induration, logistic regression analysis was performed using independent variables based on univariate analysis or previous reports.

RESULTS: In total, 69 patients were analyzed. The induration incidence was 17.4%, and three abnormal conditions were confirmed: subcutaneous edema, thrombosis, and thickening of the vessel wall. Breast cancer, non-vesicant drug, vein diameter, and fosaprepitant use were included in the logistic regression model. Breast cancer: odds ratio (OR) 9.25; 95 CI 1.91-44.71; non-vesicant drug: OR 1.37; 95 CI 0.13-14.95; vein diameter: OR 0.40; 95% CI 0.16-0.97; fosaprepitant use: OR 0.16; 95% CI, 0.18-10.32. CONCLUSIONS: The induration incidence was 17.4%. Risk factors for induration following chemotherapy administration were breast cancer and smaller vein diameter. Abnormal cases of subcutaneous tissue were confirmed, including subcutaneous edema, thrombosis, and thickening of the vessel wall. Induration may be prevented by
selecting larger diameter vessels using ultrasonography when catheterizing for chemotherapy.

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