

Chemotherapy can complicate immediate breast reconstruction after mastectomy

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Immediate breast reconstruction following mastectomy is becoming more prevalent. However, in breast cancer patients undergoing simultaneous chemotherapy, thrombotic complications can arise that can delay or significantly modify reconstructive plans. Outcomes of cases illustrating potential complications are published in the current issue of *Annals of Medicine and Surgery*.

Chemotherapy is increasingly used to treat larger operable or [advanced breast cancer](#) prior to surgery. Chemotherapy delivered via the placement of a central venous line that remains in place for the duration of treatment can result in pre-operative thromboembolic events, which can require the administration of anticoagulation agents. This in turn can complicate subsequent surgery and is particularly significant when complex reconstruction is anticipated immediately following the mastectomy.

"There is limited research on the impact of this complication on breast reconstruction pathways and guidance for optimal management of these patients," notes Professor Charles M. Malata, FRCS (Plast), who is Consultant Plastic & Reconstructive Surgeon at the Cambridge Breast Unit (Cambridge University Hospitals NHS Foundation Trust) and Professor of Academic Plastic Surgery at the Postgraduate Medical Institute of Anglia Ruskin University. "My colleagues and I present our clinical experience over four years of patients with [breast cancer](#) who developed thrombotic complications of their neoadjuvant chemotherapy venous lines prior to mastectomy and immediate [breast reconstruction](#)."

Investigators analyzed the pathways of seven [breast cancer patients](#) who had received primary [chemotherapy](#) during which they experienced pre-operative line-related thrombosis requiring anticoagulant therapy. Five of these patients were able to undergo surgeries as planned, however in two instances this was not the case.

Detailing the thromboembolic complications and the consequences for reconstruction, the investigators report that for one patient, surgery was delayed for three weeks while the thrombosis was managed, followed by two separate surgeries over a 12-month period to fully accomplish the reconstruction. In the second case, the reconstruction was achieved as planned, but only after a three-month delay and required anticoagulation therapy and pre-operative radiotherapy.

According to Professor Malata, "As these cases demonstrate, line-associated thrombosis will be increasingly encountered by surgeons as more patients receive [neoadjuvant chemotherapy](#) and are managed by indwelling venous access devices. With multidisciplinary cooperation among surgeons, oncologists, and hematologists, the surgical management plan for these patients can remain largely unaffected." He further cautions, "Reconstructive surgeons should, however, be flexible enough to alter their surgical plan in [patients](#) who develop line-related thrombosis."

More information: "Pre-Operative Thrombotic Complications of Neoadjuvant Chemotherapy for Breast Cancer: Implications For Immediate Breast Reconstruction," by Kate G Richards, MB BChir, MA; Parto Forouhi; Andrew Johnston; and Charles M Malata, BSc(HB), MB ChB, LRCP, MRCS, FRCS(Plast). DOI: [dx.doi.org/10.1016/j.amsu.2014.11.001](https://doi.org/10.1016/j.amsu.2014.11.001) , *Annals of Medicine and Surgery*, Volume 3, Issue 4 (December 2014)

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