

Robotic Prophylactic Nipple-Sparing Mastectomy with Immediate Prosthetic Breast Reconstruction: A prospective Study of 138 Procedures

Claire Sanson, Aurélie Roulot, Jean-François Honart, Françoise Rimareix, Nicolas Leymarie, Benjamin Sarfati

Department of Plastic and Reconstructive Surgery, Gustave Roussy, Villejuif, France

Abstract

Background: Robotic breast surgery is an emergent procedure with encouraging preliminary results. The aim of this study is to assess the feasibility and the safety of robotic nipple sparing mastectomy (RNSM) with immediate prosthetic breast reconstruction (IPBR).

Methods: This is a prospective study including from December 2015 to January 2020 all RNSM surgeries with IPBR, in patients with moderate ptosis and A B or C cup. The primary endpoint was the rate of major necrosis. Secondary endpoints were conversion rate, postoperative complications (infections, hematoma, implant exposure), aesthetic results and quality of life.

Results: 79 patients underwent 138 RNSM with IPBR. The average follow-up was 28 months. 2 procedures required conversion. Two cases of major necrosis occurred (1.4%). 9 surgical site infections were observed (6.5%), 4 infections could be treated with implant replacement. Unfortunately, 5 others resulted in implant loss. 4 other implant losses occurred: 2 due to major necrosis, and 2 due to periprosthetic capsula. In total, 9 implants were lost (6.5%). Esthetical results were mostly very satisfying and quality of life was not affected by the mastectomy.

Conclusions: RSNM with IPBR was associated with low rates of major necrosis. It is a safe and reproducible procedure that allows breast reconstruction without visible scar.

Key words: robotic mastectomy, breast reconstruction, minimal invasive surgery, nipple-sparing mastectomy, prophylactic surgery