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ORIGINAL ARTICLE – RECONSTRUCTIVE ONCOLOGY

Computer-Based Learning Module Increases Shared Decision Making in Breast Reconstruction

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ABSTRACT

Background. Shared decision making (SDM) combines evidence-based medicine with individual patient preferences. Patients who are actively engaged in their own health care management with their physicians have been shown to experience not only increased compliance, but also higher satisfaction and better outcomes. We hypothesize that a computer-based learning module for breast reconstruction increases patient involvement in the decision-making process.

Materials and Methods. Women who underwent either immediate or delayed breast reconstruction at an academic teaching hospital from 2004 to 2007 were identified. Patients meeting inclusion criteria were mailed questionnaires on demographics, informational resources, and decision-making processes. Questionnaire results were divided into 2 groups for analysis: patients who received a standard surgeon consultation and patients who were shown a computer-based decision aid in addition to the standard consultation.

Results. There were 358 women eligible for our study. A total of 255 patients (75.9%) responded to the survey; 168 patients were shown the computer-based decision aid and 87 patients were not. Patients who used the computer-based learning module reported a greater role in choosing the type of reconstruction ($P < .001$). Additionally, these patients reported a greater number of reconstructive options offered to them ($P < .001$) and were more satisfied with the amount of information provided by their reconstructive surgeon ($P = .049$).

Conclusions. A computer-based learning module allows patients to assimilate information and actively participate in choosing type of breast reconstruction. Use of this educational modality represents a simple and effective way to improve the shared decision-making process.

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The treatment modalities for women diagnosed with breast cancer are often complex. Patients receiving a cancer diagnosis are in an emotionally charged state, making communication of information difficult. Decisions necessary for surgical cancer treatment, chemotherapy, radiation therapy, and reconstruction are all presented to a patient in rapid succession where time to treatment is critical. The mass of information associated with a cancer diagnosis is overwhelming to most patients. Overall, less than 20% of women in the United States elect to proceed with reconstructive surgery, as many patients are not offered reconstruction, lack access to plastic surgeons, and are not candidates for reconstruction.[1]

The decision to proceed to reconstruction after mastectomy has been previously shown to play an important role in long-term psychosocial health in cancer survivorship.[2] The multitude of options for reconstruction is often confusing including tissue expanders, breast implants, latissimus muscle flaps (with or without implants), autologous abdominal flaps (including pedicled transverse rectus abdominis myocutaneous (TRAM), free microsurgical TRAM, deep inferior epigastric perforator (DIEP), and superficial inferior epigastric artery (SIEA) flaps), and autologous gluteal flaps (superior gluteal artery perforator (SGAP) flap). Each option is associated with distinct advantages and complications; this is made even more complex as type of mastectomy, need for radiation therapy, and timing of chemotherapy can all play a role in the reconstructive outcome.