Prophylactic mastectomy generally occurs in two different patient populations: (1) high-risk women without breast cancer who undergo bilateral prophylactic mastectomy (BPM) to reduce their risk of developing breast cancer and (2) women with unilateral breast cancer who choose contralateral prophylactic mastectomy (CPM) to prevent cancer in the contralateral breast. The purpose of this article is to review the indications, outcomes, and trends in the use of BPM and CPM.

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Breast cancer following ovarian cancer in BRCA mutation carriers.

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Erratum in

IMPORTANCE: BRCA mutation carriers are at increased risk of developing breast cancer. However, the incidence of breast cancer after a diagnosis of epithelial ovarian cancer (EOC), one of the tubal/peritoneal cancers collectively referred to as pelvic serous carcinomas, is not well known. Optimal breast cancer surveillance and detection for these patients have also not been well characterized.

OBJECTIVES: To determine the incidence of breast cancer after a diagnosis of EOC and to evaluate the need for breast cancer surveillance for these patients.

DESIGN, SETTING, AND PARTICIPANTS: A retrospective database review of 364 patients who underwent BRCA mutation testing for EOC (stages I-IV) between 1998 and 2012 at an academic medical center with gynecologic and breast cancer centers.

RESULTS: Of 364 patients, 135 (37.1%) were found to carry a germline BRCA1 or BRCA2 mutation. The mean age of patients at diagnosis of EOC was 49.5 years (range, 28-89 years). Of the 135 patients, 12 (8.9%) developed breast cancer. The median time from diagnosis of EOC to diagnosis of breast cancer was 50.5 months. Annual mammography was performed for 80 patients (59.3%), with annual magnetic resonance imaging of the breasts performed for 60 patients (44.4%). Thirteen patients (9.6%) underwent a bilateral prophylactic mastectomy at a median of 23 months following EOC diagnosis. Breast cancer was most commonly diagnosed by mammography for 7 of the 12 patients (58.3%), 3 (25.0%) of whom had a palpable mass and 2 (16.7%) of whom had incidental breast cancer detected during a prophylactic mastectomy. Seven patients with breast cancer (58.3%) underwent a bilateral mastectomy. All patients had early-stage breast cancer (stages 0-II). Four patients (33.3%) received adjuvant chemotherapy. At a median follow-up of 6.3 years, 4 of the 12 patients (33.3%) died of recurrent EOC after a diagnosis of breast cancer. The overall 10-year survival rate for the entire cohort of 135 patients was 17.0%.

CONCLUSIONS AND RELEVANCE: The risk of metachronous breast cancer is low in patients with known BRCA mutations and EOC. A majority of these cases of breast cancer at an early stage are detected by use of mammography. Despite the small number of patients in our study, these results suggest that optimal breast cancer surveillance for patients with BRCA-associated EOC needs to be reevaluated given the low incidence of breast cancer among these high-risk patients. Confirmation of our findings from larger studies seems to be indicated.

PMID: 25372568  [PubMed - indexed for MEDLINE]


Prophylactic bilateral mastectomy and contralateral prophylactic mastectomy.

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With increasing public awareness of the risk for breast cancer and modern techniques of reconstruction, the option of surgical prophylaxis for risk reduction is becoming increasingly popular. Bilateral prophylactic mastectomy for women at increased risk of developing breast cancer and contralateral prophylactic mastectomy for those with unilateral breast cancer seeking symmetry, risk reduction, and ease of follow-up are acceptable options for many women. However, prophylactic surgery is not an inconsequential decision, and careful consideration should be given to the risks and benefits of such procedures.

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Videoendoscopic single-port nipple-sparing mastectomy and immediate reconstruction.

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PURPOSE: Single-incision videoendoscopic surgery has recently become popular as a result of the ongoing search for less invasive procedures. The aim of this study was to evaluate the safety and efficacy of endoscopic single-port nipple-sparing mastectomy, axillary lymphadenectomy, and immediate reconstruction in patients with breast cancer.

PATIENTS AND METHODS: From May 14, 2012 through January 23, 2013, 10 patients underwent videoendoscopic single-port nipple-sparing mastectomy and axillary dissection via a single, limited incision and immediate prosthetic reconstruction. Patient charts were reviewed, and demographic data, operative time, complications and pathology results were analyzed.

RESULTS: In all patients, videoendoscopic surgery was performed successfully. Of 10 patients, 7 were diagnosed as having invasive ductal carcinoma, 2 had a ductal carcinoma in situ, and 1 underwent bilateral prophylactic mastectomy. The weight of the resected gland was 300-650 g, with a mean of 420 g. There were no operative complications, and the mean operative time was 250 minutes (range, 160-330 minutes). One-stage reconstruction with implants was performed on 4 patients, whereas expanders were placed in the remaining 6. Surgical margins of all cases were pathologically negative, and there were no recurrences observed during the early follow-up period.

CONCLUSIONS: Videoendoscopic single-port nipple-sparing mastectomy is technically feasible even in larger breasts, enabling immediate reconstruction with good cosmetic outcomes. However, further studies with larger clinical series and long-term follow-up are required to compare the safety and efficacy of the technique with those of the standard nipple-sparing mastectomy.

PMCID: PMC3935461
PMID: 24401140 [PubMed - indexed for MEDLINE]


Body image issues after bilateral prophylactic mastectomy with breast reconstruction in healthy women at risk for hereditary breast cancer.

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The outcome of bilateral prophylactic mastectomy with breast reconstruction (BPM-IBR) in healthy BRCA1/2 mutation carriers can be potentially burdensome for body image and the intimate relationship. Therefore, in the current analysis the
impact on body image, sexual and partner relationship satisfaction was prospectively investigated in women opting for BPM-IBR as well as cancer distress and general quality of life. Healthy women undergoing BPM-IBR completed questionnaires preoperatively (T0, n = 48), at 6 months (T1, n = 44) and after finishing breast reconstruction (median 21 months, range 12-35) (T2, n = 36). With multi-level regression analyses the course of outcome variables was investigated and a statistically significant change in body image and/or sexual and partner relationship satisfaction was predicted by baseline covariates. Body image significantly decreased at T1. At T2 sexual relationship satisfaction and body image tended to be lower compared to baseline. The overall partner relationship satisfaction did not significantly change. At T2, 37 % of the women reported that their breasts felt unpleasantly, 29 % was not satisfied with their breast appearance and 21 % felt embarrassed for their naked body. Most body image issues remained unchanged in 30 % of the women. A negative body image was predicted by high preoperative cancer distress. BPM-IBR was associated with adverse impact on body image in a substantial subgroup, but satisfaction with the overall sexual and partner relationship did not significantly change in time. The psychosocial impact of BPM-IBR in unaffected women should not be underestimated. Psychological support should ideally be integrated both before and after BPM-IBR.

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Breast reconstruction in bilateral prophylactic mastectomy patients: factors that influence decision making.

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BACKGROUND: Utilization of bilateral prophylactic mastectomy (BPM) and reconstruction has increased secondary to numerous medical advances. The purpose of this study was to examine decision making in women electing this therapy to further understand what influences and drives this decision.

METHODS: The authors conducted a survey study, enrolling patients who elected BPM and reconstruction. Participants were mailed structured questionnaires utilizing validated and study specific tools addressing: demographics, treatment decisions, autonomy, decision making and information seeking preferences, and breast cancer treatment knowledge. Analysis was performed overall and by reconstruction.

RESULTS: 40 patients responded (20 autologous, 19 implant and 1 combination, 66% response rate). The cohort was well educated and wealthy. Reconstructive options played a large role in the consideration of BPM. Patients were influenced by their physicians and less so by non-traditional means (media, internet, etc). Autologous reconstructions had a stronger desire to utilize their own tissue (p < 0.001) and were less concerned with the amount of surgery (0.02) and resulting scars (p = 0.01). Implant reconstructions more often stated that they did not have enough tissue for autologous reconstruction (p < 0.001) and did have a lower BMI, 24.2 vs. 27.5 (p = 0.03). Additionally, they were more influenced by non-traditional means (p < 0.001) and by other patients (p = 0.02).

CONCLUSIONS: Multiple factors influence decision making in BPM and reconstruction, with the ultimate choice in reconstruction involving tissue availability, appearance of implant reconstructions, total amount of surgery
required, and extent of visible scars. Patients were strongly influenced by their physicians, and less so by non-traditional means.

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Role of Breast Surgery in BRCA Mutation Carriers.

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BRCA mutation carriers have a life-long breast cancer risk between 55 and 85% and a high risk of developing breast cancer at a very young age, depending on the type of mutation. The risk of developing contralateral breast cancer after a first breast cancer is elevated up to 65%, especially in case of BRCA1 mutation and young age at the first breast cancer. Since bilateral prophylactic mastectomy is associated with a risk reduction of 90-95% of developing primary or contralateral breast cancer, this option is a key point within the counseling process for patient information and shared decision-making of mutation carriers. Although the local control after breast-conserving therapy in mutation carriers seems to be comparable to that of sporadic breast cancer patients, individual patient information and counseling should include all alternative procedures of oncologically adequate mastectomy techniques and immediate reconstruction. Excellent cosmetic results, high levels of life quality, and good patient acceptance can be achieved with the recent developments in reconstructive surgery of the breast.

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Prophylactic mastectomy: is it worth it?

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BACKGROUND: Breast cancer is the second mortality-related cancer and the leading cause of general mortality in women aged 40-55. Prophylactic mastectomy has proved to be effective in several clinical scenarios but is still a somewhat controversial procedure.

METHODS: We performed a retrospective study by reviewing the records of all
patients who underwent prophylactic mastectomy in a 25-year period. We evaluated the aesthetic and long-term oncologic outcomes, complications, and patient satisfaction.

RESULTS: We had 52 patients, 40 of them unilateral cases (contralateral prophylactic mastectomy) and 12 bilateral (bilateral prophylactic mastectomy) for a total of 64 mastectomized breasts. We had 1 (1.56%) case of unexpected breast cancer in the mastectomy specimens. Forty-two (65.62%) cases had a subcutaneous prophylactic mastectomy and 22 (34.37%) cases had a simple total prophylactic mastectomy. Fifty-eight (90.62%) cases underwent reconstruction with alloplastics and 6 (9.37) cases with autologous tissue of which 5 (7.81%) cases received latissimus dorsi flaps with alloplastic implants and 1 (1.56%) case had a TRAM flap. The complications included 4 (6.25%) breasts that developed capsular contracture, 2 (3.12%) cases of hematoma, and 1 (1.56%) infection. Concerning patient satisfaction, 39 (75%) patients reported being highly satisfied, 10 (19.23%) partially satisfied, and 3 (5.76%) unsatisfied. When we performed the aesthetic evaluation according to our scale, we got an overall aesthetic index of 8.8.

CONCLUSION: Prophylactic mastectomy is becoming an increasingly frequent procedure. Plastic surgeons should consider the aesthetic outcome when planning mastectomy and reconstruction. Our ability to predict the high-risk population has improved and it is that population who can get the best benefit from this intervention. The recommendation against subcutaneous prophylactic mastectomy lacks scientific evidence. There is plenty of evidence that prophylactic mastectomy lowers the risk of breast cancer in the high-risk population in at least 95%. Our experience with prophylactic mastectomy is extremely satisfactory, with an overall patient satisfaction rate of 94%, no mortality, and an oncologic long-term outcome of 0% of ulterior development of breast cancer. Our series, although relatively small, should provide some insight into the power of this technique and we think all plastic surgeons should have it in their surgical armamentarium and should share their experiences so that this procedure may become more widely accepted. We also think that plastic surgeons should strive for perfecting the technique to reduce the complication rate and therefore help the procedure gain acceptance by the medical community.

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Recommendations for women with lobular carcinoma in situ (LCIS).

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Comment in

Atypical lobular hyperplasia (ALH) and lobular carcinoma in situ (LCIS) represent a spectrum of breast disease referred to as "lobular neoplasia" (LN). Although LN occurs relatively infrequently, it is associated with an increased risk of breast cancer, ranging from a three- to four-fold increased risk with ALH up to an eight- to ten-fold increased risk with LCIS. Initially regarded as a direct precursor to invasive lobular carcinoma, LCIS used to be treated by mastectomy.
Subsequent studies demonstrating that the risk of invasive disease was conferred bilaterally and that subsequent cancers were of both the ductal and lobular phenotype led to the acceptance of LCIS as a marker of increased risk rather than a true precursor. Today, a diagnosis of LCIS remains one of the greatest identifiable risk factors for the subsequent development of breast cancer. As such, patients are offered one of three options: (1) lifelong surveillance with the goal of detecting subsequent malignancy at an early stage; (2) chemoprevention; or (3) bilateral prophylactic mastectomy. Paralleling changes in the management of invasive breast cancer, trends in the management of LCIS have moved toward more conservative management. However, we have made little progress in understanding the biology of LCIS and therefore remain unable to truly optimize recommendations for individual patients.

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Preoperative risk assessment among women undergoing bilateral prophylactic mastectomy for cancer risk reduction.

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BACKGROUND: Cancer risk assessment is an important decision-making tool for women considering irreversible risk-reducing surgery. Our objective was to determine the prevalence of BRCA testing among women undergoing bilateral prophylactic mastectomy (BPM) and to review the characteristics of women who choose BPM within a metropolitan setting.

METHODS: We retrospectively reviewed records of women who underwent BPM in the absence of cancer within 2 health care systems that included 5 metropolitan hospitals. Women with invasive carcinoma or ductal carcinoma in situ (DCIS) were excluded; neither lobular carcinoma in situ (LCIS) nor atypical hyperplasia (AH) were exclusion criteria. We collected demographic information and preoperative screening and risk assessment, BRCA testing, reconstruction, and associated cancer risk-reducing surgery data. We compared women who underwent BRCA testing to those not tested.

RESULTS: From January 2002 to July 2009, a total of 71 BPMs were performed. Only 25 women (35.2%) had preoperative BRCA testing; 88% had a BRCA mutation. Compared with tested women, BRCA nontested women were significantly older (39.1 vs. 49.2 years, P < 0.001), had significantly more preoperative biopsies and mammograms and had fewer previous or simultaneous cancer risk-reducing surgery (oophorectomy). Among BRCA nontested women, common indications for BPM were family history of breast cancer (n = 21, 45.6%) or LCIS or AH (n = 16, 34.8%); 9 nontested women (19.6%) chose BPM based on exclusively on cancer-risk anxiety or personal preference.

CONCLUSION: Most women who underwent BPM did not receive preoperative genetic testing. Further studies are needed to corroborate our findings in other geographic regions and practice settings.

PMID: 21424371 [PubMed - indexed for MEDLINE]
High satisfaction rate ten years after bilateral prophylactic mastectomy - a longitudinal study.

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Women from families with an increased risk for breast/ovarian cancer have undergone bilateral prophylactic mastectomy (BPM) since the early 1990s at the Karolinska University Hospital in Sweden. Perceptions of BPM as reported by the first women who underwent the procedure have previously been evaluated on a short-term basis (1-3 years). The present study aims to evaluate the long-term (10 years) physical and psychological consequences of BPM in the same cohort of women. Some of the very first women to undergo BPM participated in the present interview study (n=13). The semi-structured interviews focused on the women's long-term experiences related to BPM and immediate breast reconstruction. Overall, the women were satisfied with their decision to undergo BPM and perceived a negligible remaining risk of getting breast cancer. For most women, the operation had not resulted in changes in family life or lifestyle (n=8), although some described that the relationship with their spouse was affected (8/13), either in a negative (n=5) or positive (n=3) way. The cosmetic results were mainly positive (n=10). Recurrent counselling and support during the whole process of decision, treatment and follow up is recommended.

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PMID: 20597955 [PubMed - indexed for MEDLINE]

Bilateral prophylactic mastectomy in Swedish women at high risk of breast cancer: a national survey.


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BACKGROUND/OBJECTIVE: This study attempted a national inventory of all bilateral prophylactic mastectomies performed in Sweden between 1995 and 2005 in high-risk women without a previous breast malignancy. The primary aim was to investigate the breast cancer incidence after surgery. Secondary aims were to describe the preoperative risk assessment, operation techniques, complications, histopathological findings, and regional differences.

METHODS: Geneticists, oncologists and surgeons performing prophylactic breast
surgery were asked to identify all women eligible for inclusion in their region. The medical records were reviewed in each region and the data were analyzed centrally. The BOADICEA risk assessment model was used to calculate the number of expected/prevented breast cancers during the follow-up period.

RESULTS: A total of 223 women operated on in 8 hospitals were identified. During a mean follow-up of 6.6 years, no primary breast cancer was observed compared with 12 expected cases. However, 1 woman succumbed 9 years post mastectomy to widespread adenocarcinoma of uncertain origin. Median age at operation was 40 years. A total of 58% were BRCA1/2 mutation carriers. All but 3 women underwent breast reconstruction, 208 with implants and 12 with autologous tissue. Four small, unifocal, invasive cancers and 4 ductal carcinoma in situ were found in the mastectomy specimens. The incidence of nonbreast related complications was low (3%). Implant loss due to infection/necrosis occurred in 21 women (10%) but a majority received a new implant later. In total, 64% of the women underwent at least lununicipitated secondary operation.

CONCLUSIONS: Bilateral prophylactic mastectomy is safe and efficacious in reducing future breast cancer in asymptomatic women at high risk. Unanticipated reoperations are common. Given the small number of patients centralization seems justified.

PMID: 21587115 [PubMed - indexed for MEDLINE]


Bilateral prophylactic mastectomy in women with inherited risk of breast cancer--prevalence of pain and discomfort, impact on sexuality, quality of life and feelings of regret two years after surgery.

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BACKGROUND: Mastectomy due to breast cancer is associated with chronic pain and a negative impact on sexuality. The purposes of the study were to analyze the prevalence of pain and discomfort in the breasts, impact on sexuality, quality of life, and feelings of regret after bilateral prophylactic mastectomy and immediate reconstruction with implants.

METHODS: Fifty-nine women operated 2004-2006 were included. A questionnaire was sent out two years after the procedure. Complications and re-operations were recorded.

RESULTS: Mean follow-up time was 29 months. 93% of patients answered the questionnaire. 69% reported pain and 71% discomfort in the breasts. Lost or much reduced sexual sensations were reported by 85% and enjoyment of sex was negatively impacted for 75% of patients. Quality of life was not affected and feelings of regret were almost non-existent.

CONCLUSIONS: It is important to inform women approaching this prophylactic procedure about the risk of having unwanted secondary effects.

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PMID: 20605453 [PubMed - indexed for MEDLINE]
Prophylactic mastectomy for the prevention of breast cancer.

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BACKGROUND: Recent progress in understanding the genetic basis of breast cancer has increased interest in prophylactic mastectomy (PM) as a method of preventing breast cancer.

OBJECTIVES: (i) To determine whether prophylactic mastectomy reduces death rates from any cause in women who have never had breast cancer and in women who have a history of breast cancer in one breast, and (ii) to examine the effect of prophylactic mastectomy on other endpoints, including breast cancer incidence, breast cancer mortality, disease-free survival, physical morbidity, and psychosocial outcomes.

SEARCH STRATEGY: We searched the Cochrane Central Register of Controlled Trials (CENTRAL, 2002), MEDLINE and Cancerlit (1966 to June 2006), EMBASE (1974 to June 2006), and the WHO International Clinical Trials Registry Platform (WHO ICTRP) search portal (until June 2006). Studies in English were included.

SELECTION CRITERIA: Participants included women at risk for breast cancer in at least one breast. Interventions included all types of mastectomy performed for the purpose of preventing breast cancer.

DATA COLLECTION AND ANALYSIS: At least two authors independently abstracted data. Data were summarized descriptively; quantitative meta-analysis was not feasible due to heterogeneity of study designs and insufficient reporting. Data were analyzed separately for bilateral prophylactic mastectomy (BPM) and contralateral prophylactic mastectomy (CPM).

MAIN RESULTS: All 39 included studies were observational studies with some methodological limitations; randomized trials were absent. The studies presented data on 7,384 women with a wide range of risk factors for breast cancer who underwent PM. BPM studies on the incidence of breast cancer and/or disease-specific mortality reported reductions after BPM particularly for those with BRCA1/2 mutations. For CPM, studies consistently reported reductions in incidence of contralateral breast cancer but were inconsistent about improvements in disease-specific survival. Only one study attempted to control for multiple differences between intervention groups and this study showed no overall survival advantage for CPM at 15 years. Another study showed significantly improved survival following CPM but after adjusting for bilateral prophylactic oophorectomy, the CPM effect on all-cause mortality was no longer significant. Sixteen studies assessed psychosocial measures; most reported high levels of satisfaction with the decision to have PM but more variable satisfaction with cosmetic results. Worry over breast cancer was significantly reduced after BPM when compared both to baseline worry levels and to the groups who opted for surveillance rather than BPM. Case series reporting on adverse events from PM with or without reconstruction reported rates of unanticipated re-operations from 4% in those without reconstruction to 49% in patients with reconstruction.

AUTHORS' CONCLUSIONS: Sixteen studies have been published since the last version
of the review, without altering our conclusions. While published observational studies demonstrated that BPM was effective in reducing both the incidence of, and death from, breast cancer, more rigorous prospective studies (ideally randomized trials) are needed. BPM should be considered only among those at very high risk of disease. There is insufficient evidence that CPM improves survival and studies that control for multiple confounding variables are needed.

PMID: 21069671  [PubMed - indexed for MEDLINE]


No differences in aesthetic outcome or patient satisfaction between anatomically shaped and round expandable implants in bilateral breast reconstructions: a randomized study.

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Comment in

BACKGROUND: The demand for bilateral mastectomy and immediate breast reconstruction has increased in recent years, primarily due to the development of genetic testing. The aim of this study was to evaluate if there was a difference between anatomically shaped and round permanent expandable implants in one-stage bilateral breast reconstruction after bilateral prophylactic mastectomy.

METHODS: The anatomically shaped permanent expander implant McGhan Style 150 (Inamed, Santa Barbara, Calif.) was compared with the round permanent expander implant Siltex Becker 25 (Mentor, Santa Barbara, Calif.). Thirty-six women who opted for bilateral prophylactic mastectomy and immediate reconstruction with implants from 2004 to 2006 were included and randomly assigned to each group [18 women (36 breasts) per group]. Time to follow-up was a minimum of 2 years after the bilateral prophylactic mastectomy. Implant-related complications, breast symmetry, aesthetic outcome, and patient satisfaction were evaluated. Aesthetic outcome was evaluated by an expert panel that also tried to recognize if the breasts were reconstructed with anatomically shaped or round implants. Patient satisfaction was evaluated by a questionnaire.

RESULTS: Average time to follow-up was 30 months (range, 24 to 49 months). There was no statistical difference between the two implant groups in terms of complications, breast symmetry, or outcome scores from the expert panel and patient assessment. The expert panel guessed the right implant shape in 42 percent of the anatomically shaped implants and 66 percent of the round implants.

CONCLUSION: In immediate one-stage breast reconstruction after bilateral prophylactic skin-sparing mastectomy, anatomically shaped and round permanent expander implants had comparable complication rates, aesthetic outcomes, and patient satisfaction after 2 years of follow-up.

PMID: 20639801  [PubMed - indexed for MEDLINE]

Risk-reducing strategies for women carrying BRCA1/2 mutations with a focus on prophylactic surgery.

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BACKGROUND: Women who have inherited mutations in the BRCA1 or BRCA2 genes have substantially elevated risks of breast and ovarian cancer. Mutation carriers have various options, including extensive and regular surveillance, chemoprevention and risk-reducing surgery. The aim of this review is to provide an up-to-date analysis and to subsequently summarise the available literature in relation to risk-reducing strategies, with a keen focus on prophylactic surgery.

METHODS: The literature review is facilitated by Medline and PubMed databases. The cross-referencing of the obtained articles was used to identify other relevant studies.

RESULTS: Prophylactic surgery (bilateral mastectomy, bilateral salpingo-oophorectomy or a combination of both procedures) has proved to be the most effective risk-reducing strategy. There are no randomised controlled trials able to demonstrate the potential benefits or harms of prophylactic surgery; therefore, the evidence has been derived from retrospective and short follow-up prospective studies, in addition to hypothetical mathematical models. Based on the current knowledge, it is reasonable to recommend prophylactic oophorectomy for BRCA1 or BRCA2 mutation carriers when childbearing is completed in order to reduce the risk of developing breast and ovarian cancer. In addition, women should be offered the options of rigorous breast surveillance, chemoprevention with anti-oestrogens—especially for carriers of BRCA2—or bilateral prophylactic mastectomy.

CONCLUSION: The selection of the most appropriate risk-reducing strategy is not a straightforward task. The impact of risk-reducing strategies on cancer risk, survival, and overall quality of life are the key criteria considered for decision-making. Notably, various other factors should be taken into consideration when evaluating individual mutation carriers' individual circumstances, namely woman's age, morbidity, type of mutation, and individual preferences and expectations. Although prospective randomised controlled trials concerned with examining the various interventions in relation to the woman's age and type of mutation are needed, randomisation is extremely difficult and rather deemed unethical given the current available evidence from retrospective studies.

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PMID: 20961453  [PubMed - indexed for MEDLINE]


Unilateral failures in bilateral microvascular breast reconstruction.

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BACKGROUND: As rates of bilateral prophylactic mastectomy and contralateral
prophylactic mastectomy have increased over the past decade, bilateral microvascular breast reconstruction has played an increasing role in breast cancer care. Data on unilateral flap failure in bilateral microvascular breast reconstructions have been lacking, and strategies to address the challenges encountered in this situation are needed.

METHODS: A retrospective review of all simultaneous bilateral microvascular breast reconstructions performed by the senior author (M.Y.N.) from July of 1999 to July of 2008 was conducted. Flap failures were identified and reviewed for operative parameters, causes of flap loss, and techniques used for secondary reconstruction.

RESULTS: The authors identified 171 consecutive patients who underwent bilateral microvascular breast reconstruction between July of 1999 and July of 2008. In these patients, 342 flaps were attempted, including 108 free transverse rectus abdominis musculocutaneous flaps, 228 deep inferior epigastric artery perforator flaps, and six superior gluteal artery perforator flaps. Twelve flaps failed or were aborted intraoperatively, yielding an overall failure rate of 3.5 percent. The authors' unilateral microsurgical breast reconstruction failure rate over this period was 2.1 percent (eight of 386). No bilateral failures occurred. Causes of flap failure included venous insufficiency (six of 12), lack of adequate perforator anatomy (three of 12), and perforator injury during dissection (two of 12). Secondary reconstruction with tissue expanders and implants was performed in 11 of 12 patients who underwent an average of 2.25 additional procedures to complete reconstruction.

CONCLUSIONS: Flap failure is more common in bilateral reconstructions than in unilateral reconstructions, largely secondary to the obligation to use both sides of the abdominal donor tissue. When flap failure does occur, techniques to optimize prosthetic reconstruction can ultimately result in successful bilateral reconstructions despite free flap failure.

PMID: 20595829  [PubMed - indexed for MEDLINE]