FINDING HEALTH, AFTER CANCER

Optional Cases: Maria

PRESENTATION

Maria is a 40-year-old woman who comes to establish care with you. She was diagnosed with invasive ductal carcinoma of the left breast (ER/PR positive, HER2 negative) two years ago after self-palpating a breast mass.

TREATMENT

Bilateral mastectomy with reconstruction
Chemotherapy: doxorubicin (Adriamycin), paclitaxel (Taxol), and cyclophosphamide (Cytoxan)
Radiation (left chest)

Endocrine (also called hormonal) therapy with goserelin (Zoladex) to suppress ovarian function and exemestane (an oral aromatase inhibitor). Goserelin is injected monthly or every 3 months and is classified as a Gonadotropin Releasing Hormone agonist

HISTORY

She has had no menses since chemotherapy. She is overweight and has gained more weight since starting her cancer treatment. She developed swelling in her left arm and this is uncomfortable -painful and worse with overuse. Because of her young age at diagnosis, she had genetic testing and this did not show an abnormal mutation, so she has no identifiable familial predisposition to cancer.

Maria is married, has two children, age 5 and 7, and worked as a lawyer prior to her diagnosis and treatment. She sees her oncologist or oncology nurse practitioner every 3 months when she goes in for her goserelin injections.

SPECIAL CONSIDERATIONS

It is important to note that because Maria was less than 40 years of age when she was diagnosed, her breast cancer would not have been found on routine screening (which begins at age 40 in the general population).

We also know less about the natural history of young women diagnosed with breast cancer, as most of the knowledge and statistics about this disease are derived from middle-aged and older women. One lesson I learned from Maria and other young breast cancer survivors is that many experienced their diagnosis as a total shock.

NOTES FOR CARE

Lymphedema

Maria notes that she has problems with left arm swelling that is worse with overuse. This symptom is likely from lymphedema, which comes from damage of the lymphatic system following radiation or surgeries like lymph node dissection.

Lymphedema can cause swelling, heaviness, pain, and decreased range of motion/strength in the limb on the same side as the treatment. It typically occurs within 18 months after treatment, but can develop anytime. Lymphedema can impair functional status and can lead to distress and increased risk of infection. [1]

Early diagnosis and treatment of lymphedema improves potential response. Compression, specialized physical therapists, and self-care education should be recommended. Lymphedema therapists can do progressive resistance training, range-of-motion exercises, and manual lymphatic drainage.

While observational studies show that venipuncture and blood pressure measurement with arm cuff are not associated with exacerbation or development of lymphedema, the at-risk/affected limb is usually avoided for these procedures unless necessary. [2]

If Maria has not been seen by a lymphedema specialist, you can make a big difference in her quality of life by referring her to one.

NOTES FOR CARE

Referral to genetics: whom to refer, when and why?

One of the main functions of survivorship visits is to think about the patient's future cancer risk. The ASCO guideline[3] for referring patients to genetics tells us to refer women with :

- Ashkenazi Jewish heritage
- Diagnosed < 50 years
- Triple negative breast cancer diagnosed at < 60 years
- Bilateral breast cancer
- Ovarian cancer at any age
- A first or second degree relative who had ovarian cancer
- A first degree relative with breast cancer <50 years
- 2 or more 1st or 2nd degree relatives with breast cancer

As a primary care provider, do not assume that genetic testing was done even if you think it was indicated. Ask your patients, and if they have not been seen by a genetic counselor, please place the referral.

The science of genetic testing continues to evolve with the development of newer and more comprehensive testing approaches, which means that sometimes, patients benefit from repeat testing years after their original tests. In general, if your patient was referred for genetic counseling prior to June 2013 (when the *BRCA1/2* patent was overruled and testing became more broad), it would be reasonable to refer your patient back for counseling and consideration of additional (more comprehensive) testing if applicable.

Patients may ask you why? Explain to them that this information affects their own care - if they carry a cancer risk gene mutation they may be at increased risk for other cancers, such as ovarian cancer or colon cancer. Those with a mutation in the *BRCA* gene are at risk for ovarian cancer, for which there is no screening test for early detection, and prophylactic oophorectomy needs to be considered. AND their family members (siblings, children, nephews and nieces) may also benefit from this information.

Because new family members may be diagnosed or new information may become available over time, I recommend reviewing and updating the family cancer history annually.

Chemotherapy Induced Peripheral Neuropathy

Chemotherapy induced peripheral neuropathy (CIPN) is a common acute and long-term effect of treatment. Patients treated with platinum drugs (often used in testicular, colon, ovarian, lung cancer), taxanes (breast, lung, stomach, ovarian cancer), vinca alkaloids (leukemia, breast cancer, some sarcomas) and bortezemib (multiple myeloma) are most vulnerable.

CIPN starts during active treatment and can be dose-limiting if severe - this means the patient will not be able to receive the full intended dose. CIPN affects sensation and has a symmetric, distal, "stocking-glove" distribution.

The majority of CIPN will improve in the 6 to 18 months after treatment, but persistent symptoms after 18 months are less likely to resolve. As a long-term effect, CIPN can disrupt mobility, proprioception, balance, and functional status.

Treatment of CIPN should include physical therapy for mobility concerns, targeted exercise, and fall prevention. The only pharmacologic therapy with sufficient data is duloxetine, though benefit is usually modest. Gabapentin/pregabalin and tricyclic antidepressants have insufficient evidence, but are felt reasonable by some expert groups.[4]

None of these interventions cure the problem, they are only intended to diminish symptoms of pain and discomfort.

NOTES FOR CARE

Health promotion, focus on diet and exercise

Healthy diet, exercise, and weight management should be encouraged in all people who have been treated for cancer in order to manage physical and mental wellness, comorbidities, and treatment-related effects.

Obesity has been associated with higher risk of recurrence and death in some cancers.[5] Therefore, healthy diet, increased physical activity, and weight management are particularly important in cancer survivors, in addition to improving quality of life and minimizing disease and treatment-related effects. Obesity can exacerbate functional decline and comorbidity. Nutrition specialist support can be helpful for overweight and underweight patients.

Increased physical activity can help manage ongoing pain, fatigue, emotional distress, bone health, and treatment side effects. Many cancer centers and community centers have specific exercise, mindfulness, and support programs designed for survivors.

Financial Toxicity

Maria is the family breadwinner. Her spouse is a freelance writer and Maria's paycheck is essential in procuring for the family's needs, including health insurance. Maria was fortunate to have a good disability policy that paid 60% of her salary during the 9 months that she was not able to work. Many patients suffer considerable financial hardship from loss of wages and must deal with significant out of pocket expenses for co-payments for doctor's visits and medical tests, medications and equipment such as lymphedema pumps and physical therapy, in addition to the cost of childcare, transportation and parking associated with medical visits.

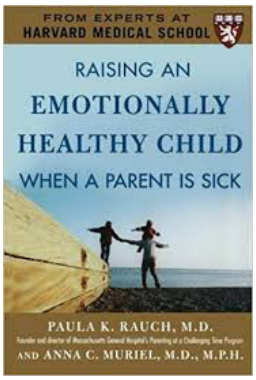
Emotional distress in people with cancer who are parents

One of the top concerns for adults undergoing treatment for any cancer, who have children living at home, is how their illness will affect their kids' emotional health. Parenting well is always challenging, but it is even more complicated when dealing with potentially taxing physical and emotional symptoms, as well as the demands of medical treatment.

You can help guide your patient by reminding them that they know their children best and reflecting together on how they have handled other challenges and transitions and by identifying professionals in their lives who can offer specific advice: their child's pediatrician, a school counselor or nurse and other adults in their social network whom they trust and can offer practical help.

Additional Resources:
https://www.mghpact.org/for-parents/a-dozen-lessons-learned

Books:
Muriel and Rauch
Raising an Emotionally Healthy Child When a Parent is Sick



REFERENCES

1 Rockson SG. Lymphedema after Breast Cancer Treatment. N Engl J Med. 2018;379:1937-1944.

2 Ferguson CM, Swaroop MN, Horick N, et al. Impact of Ipsilateral Blood Draws, Injections, Blood Pressure Measurements, and Air Travel on the Risk of Lymphedema for Patients Treated for Breast Cancer. J Clin Oncol. 2015;34(7):691-698.

3 Runowicz CD, Leach CR, Henry NL, et al. American Cancer Society/American Society of Clinical Oncology Breast Cancer Survivorship Care Guideline. J Clin Oncol. 2015;34(6):611-635.

4 Hershman DL, Lacchetti C, Dworkin RH, et al. Prevention and Management of Chemotherapy-Induced Peripheral Neuropathy in Survivors of Adult Cancers: American Society of Clinical Oncology Clinical Practice Guideline. J Clin Oncol. 2014;32(18):1941-1967.

5 Ligibel JA, Alfano CM, Courneya KS, et al. American Society of Clinical Oncology Position Statement on Obesity and Cancer. J Clin Oncol. 2014;32(31):3568-3574.