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Tips in breast cancer surgery

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Abstract

Breast Cancer (BC) is the most common cancer in women accounting for about 30% of all female cancers. The average age of incidence varies among countries While it is 62 years in the US, it is 48 years in the Arab countries. According to a recent statistics by me in Syria for example, 20% of cases occurred below the age of 40 (vs. 8% in the US). This has an important implication. A significant percentage of our BC cases occur at fertile age with high level of estrogen especially in pregnancy resulting in aggressive cancer. In dealing with breast cancer, we should be thinking of its biology. It is a slow growing cancer. By the time it is discovered mammo graphically (5 mm), it is 5 years old. Survival depends on the following five factors: 1. Size of lesion, 2. Grade, 3. Lymph node status, 4. Hormone receptor status, 5. Age of patient.

Tips in the approach of patient:

1. Tips in the approach of patient:
   - We should keep in mind that any breast lump or any new breast change should be considered cancer till proven otherwise especially if the patient is above the age of 40
   - In every patient with suspected BC, we should think if she falls into the following risk factors:
   - Family history especially in first degree relative and at young age.
   - Age at delivery of first Child.
   - Age at menarche
   - Age at menopause
   - Intake of Hormonal Replacement Therapy (HRT).
   - Other factors like obesity, sedentary life, etc.
   - Physical Exam (PE) should always be carried out at supine position to cover all axes of the breast including under the nipple and axilla.
2. Tips in making the diagnosis:
   - Mammogram and Ultrasound (U/S) should be routine.
   - Mammogram is accurate only in 85%- 90%, thus PE is essential to detect abnormal changes that didn't appear on mammogram and U/S.
   - On mammogram, speculate lesion and cluster micro calcifications are important.
   - On U/S, irregular non homogeneous, hypo echoic lesion with perpendicular shadow length larger than horizontal length are consistent with malignancy.
   - U/S is important in distinguishing cystic from solid nodule.
   - Axillary Lymph Nodes (LN's) that lost their fatty centers are compatible with malignancy.
   - The accurate diagnostic tool is doing Fine Needle Aspiration (FNA) Biopsy (Bx) or True Cut Biopsy. This latter biopsy allows us to perform Immuno Histo Chemical (IHC) and know about hormonal receptors.
   - Still negative mammogram, negative U/S, and negative FNA or neg True Cut Bx does not rule out completely cancer. We should resort to excisional Bx and path exam on the whole lesion if we clinically suspect the lesion to be cancerous.
3. Tips on decision making and PreOp management:
   - Once Dx of BC is made, staging should be done.
   - Metastatic work up is made and should include Chest X-ray (CXR), U/S to Abdomen/Pelvis (A/P) or CT to both chest and abdomen.
   - Blood tests that include Liver Function Tests (LFT's), Tumor Markers (CA15-3, CEA), and serum calcium in addition to routine tests like CBC, FBS and BUN.
   - *PET scan is done for advanced cases.

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- Staging (TNM) is made according to size of lesion, axillary status and metastasis.
- PreOp planning is very important and should follow multidisciplinary approach which often needs presenting the case at Tumor Board that includes Anatomic pathologist, surgical oncologist, medical oncologist and radiation therapist.
- Neo adjuvant Chemotherapy is given for big size lesions in order to down size case and make it amenable to conservative surgery. Also in this way we know the response rate to that chemotherapeutic agent and protocol.
- Once operability is decided upon, we should choose the type of operation: Modified Radical Mastectomy (MRM) Vs Conservative Surgery (CS) .
- Conservative Surgery (CS) has been considered the standard of care. Statistics have shown equal results to the traditional MRM.
- Indications (absolute and relative) for CS are well defined : most important is absence of micro calcifications in other quadrants , acceptable size of lesion/ size of breast , available radiotherapy center nearby and especially patient acceptance for the small percentage of local recurrence with CS . We stress that even local recurrence when it occurs after radiotherapy, a wider excision or salvage mastectomy is performed. Survival would be the same. If the patient remains worried of the possibility of local recurrence, then it is better to decide on mastectomy or Nipple Sparing Mastectomy (NSM).
- MRM is indicated in big lesions or when CS is contraindicated or when CS is done and Radio Therapy (RT) is not available in the respected area.
- Adjuvant Chemotherapy is indicated for any lesion larger than 1.4 cm and /or with positive axillary nodes.
- Radiotherapy is indicated in any case with positive axillary LN's and /or primary lesion larger than 3 cm.
- Sentinel Lymph Node (SLN) Bx is indicated in all clinically negative axillae.

Biography

Suheil Simaan got his MD from the American University of Beirut in 1963. He got his general surgical training at the Cleveland Metro Gen Hospital and the Mayo Clinic. He got his cancer surgery training at the Memorial Sloan Kettering Cancer Center NYC (1967-1970) . He was professor and chairman of surgery at Damascus University from 1983 till 2002. He became adjunct professor of surgery at the Lebanese American University (2013 -2020) .He is an author of a surgical textbook for medical students. He founded and presided the Syrian Surgical Association in 1994. He founded and presided the Syrian Society of Breast Diseases in 2009. He wrote many articles on cancer. He served editor in chief of the journal "Advances of Medical Science" (1997-2002).