Tuesday 11 September 2018

Impact of neoadjuvant chemotherapy in the treatment of breast cancer and managing the malignant axilla

08:35–08:50

Imaging overview of the breast

Professor Iain Lyburn, Gloucestershire Hospitals NHS Foundation Trust

Learning points

Neoadjuvant chemotherapy is being increasingly used in the management of breast cancer as new targeted therapies continue to be developed for specific molecular subtypes.

Established methods of assessment include physical examination, mammography, ultrasound (US) and dynamic contrast-enhanced (DCE) magnetic resonance imaging (MRI).

Changes in many tumours related to necrosis, fragmentation and fibrosis make it difficult for mammography, digital breast tomosynthesis and US to accurately determine residual tumour burden.

Multiple studies have shown that DCE MR imaging is the optimal imaging tool to determine disease response, with sensitivity approaching 90%, specificity of 60–100%, and an accuracy of approximately 91%.

Functional imaging, utilising advanced MR imaging techniques and positron emission tomography (PET)/CT may indicate response earlier than anatomic-based imaging and provide prognostic information.

References


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09:55–10:20

Pathological perspective

Dr Abeer Shaaban, University Hospitals Birmingham NHS Foundation Trust

Learning points

Neoadjuvant chemotherapy specimen are complex and time consuming. They require good correlation between the radiological and pathological findings. Chemotherapy induces histological changes within the tumour, lymph nodes and normal mammary tissue.

There are several pathological systems for assessment of degree of response to chemotherapy.

The residual cancer burden is recommended for clinical trials.

The definition of pathological complete response includes no residual invasive carcinoma in the breast and axillary lymph nodes with or without the presence of ductal carcinoma in situ (DCIS). In this context, histological identification of the tumour bed is essential.

Insertion of marker clip allows the identification and sampling of tumour bed. This is particularly important in tumours that are likely to achieve excellent response such as HER2 positive tumours.

Detailed clinical and radiological information should be available to the pathologists handling neoadjuvant specimens.

References

