BACKGROUND

Initially proposed as a treatment modality for inoperable breast tumours, neoadjuvant chemotherapy (NAC) has since evolved to become one of the standard treatment methods in managing early breast cancer. Although the overall survival rates of NAC are comparable to adjuvant chemotherapy, there have been concerns regarding the risk of progression with distant metastases, whilst receiving NAC. In this context, we aimed to assess our rate of response to NAC as well as the rate of progression and compare them to figures published in the literature.

METHODS

The chemotherapy unit booking system was utilised to identify patients who received NAC during a 2 year period between the 1st of January 2014 and 31st of December 2015. Radiology and histopathology reports as well as electronic patient records were reviewed to assess response and progression rates. RECIST 1.1 criteria was used to assess progression on radiological assessment after 4 cycles of NAC as well as on final pathological assessment.

RESULTS

The audit identified 75 patients with a total number of 82 tumours during the 2 year period. The most commonly used regimen was 5 FU, Epirubicin, Cyclophosphamide and Docetaxel (FECT). Those who were HER2 positive also received Trastuzumab during the last 3 cycles.

Of the 75 patients, only 3 (4%) patients progressed with distant metastases. This is comparable to the figures reported in the literature. A meta-analysis looking at distant metastases during NAC reported a comparable rate of 3%. Of the 82 tumours included in the analysis, 31% showed complete response and 42% showed partial response on final histopathological assessment. The pathological complete response rate (pCR) of 31% seen in our cohort is comparable to the pCR of 28% reported in the literature. 18% of the tumours were stable according to the RECIST criteria and 9% showed progressive disease. There seems to be some discordance between the radiological assessment after the 4th cycle and the final histopathological assessment (see figure 1). In particular, the radiological assessment appears to have underestimated complete response and overestimated partial response. Figure 2 shows the response of individual tumours to NAC as assessed on radiology after 4 cycles and on final pathological assessment.

CONCLUSION

The results show that our pCR is better than the reported rates and the rate of progression is comparable to the reported rates in the literature. Further work is required to monitor long-term local recurrence, especially in the context of a recent meta-analysis, which has shown higher rates of local recurrence with NAC compared to adjuvant chemotherapy. Further work is also required to analyse the response rates since the introduction of Pertuzumab as a neoadjuvant agent.

REFERENCES


Correspondence: jeffrey@doctors.org.uk