Pharmacotherapeutic report on the use of trastuzumab (Herceptin®) as adjuvant treatment of HER-2 positive primary breast cancer

Using Trastuzumab for one year, as adjuvant to sequential chemotherapy with the combination doxorubicin/cyclophosphamide and paclitaxel or other suitable schedules (see 3.b.) to treat women with HER2-positive primary breast cancer who have previously undergone surgery, can lead to a 50% reduction in the risk of the disease and the assumption is that general long-term survival increases. The side effects due to the use of trastuzumab are limited. An exception to this is the damage to the heart function which mainly takes the form of an asymptomatic drop in the left ventricle ejection fraction observed in a considerable number of patients (10-15%). 1-3% of the patients subsequently treated with doxorubicin and trastuzumab develop heart failure that can be severe (NYHA class III and IV). Patients older than 50 years of age seem to be more sensitive to this than younger patients. There is no clarity about the degree to which the drop in the left ventricle ejection fraction is reversible and what the long-term consequences are. No data have yet been published over quality of life

Conclusion therapeutic value

Adding trastuzumab to the chemotherapeutic treatment of HER2-positive patients with primary breast cancer, who have undergone surgery, using doxorubicin/ cyclophosphamide followed by paclitaxel, reduced the risk of a recidive by about 50%. The same effect is observed after chemotherapeutic treatment based mainly on doxorubicin or epirubicin alone. The effect of trastuzumab seems to come about independently and it is not related to the severity of the disease, the hormone receptor status, the use of tamoxifen or an aromatase inhibitor and the use of radiotherapy. The assumption is that using trastuzumab for one year in combination with treatment with doxorubicin/cyclophosphamide followed by paclitaxel will also increase general survival. This is not yet clear for prior treatment based only on an anthracyclin. Furthermore, there is as yet no clarity about the optimum duration of the adjuvant treatment with trastuzumab.

The risk of cardiac side effects is not inconsiderable. In 10-20% of the patients, trastuzumab causes a reduction in heart function, mostly asymptomatic, but possibly long-term, which can develop into congestive heart failure in some patients (1-3%). Apart from prior screening, and monitoring heart function during successive courses of treatment with doxorubicin and trastuzumab, continued monitoring of the heart function will be necessary after treatment has ceased. The exact place of trastuzumab in the adjuvant treatment of breast cancer will become clearer in the next few years, partly depending on the results of more detailed safety research. The possible advantages of using this drug for this indication should be weighed up against the possible disadvantages. Within this framework, there is ***therapeutic added value*** for the combination of chemotherapy and trastuzumab in women with a HER2-positive primary breast cancer who have undergone surgery.