Nab-paclitaxel versus solvent-based paclitaxel in neoadjuvant chemotherapy for early breast cancer (GeparSeptoâ€”GBG 69): a randomised, phase 3 trial.

Summary

Background

In metastatic breast cancer, nab-paclitaxel has been shown to significantly increase progression-free survival compared with solvent-based paclitaxel. The GeparSepto (GBG 69) trial assessed whether weekly nab-paclitaxel could increase the proportion of patients achieving pathological complete response compared with weekly solvent-based paclitaxel, both followed by epirubicin plus cyclophosphamide as neoadjuvant treatment.
Method

In a phase 3 randomised trial, we enrolled patients with previously untreated unilateral or bilateral primary invasive breast cancer and randomly assigned them in a 1:1 ratio using dynamic allocation and Pocock minimisation by breast cancer subtype, Ki67 and SPARC expression. Patients were treated for 12 weeks with either intravenous nab-paclitaxel 150 mg/m² (after study amendment, 125 mg/m²) on days 1, 8, and 15 for four 3-week cycles, or solvent-based intravenous paclitaxel 80 mg/m² on days 1, 8, and 15 for four 3-week cycles. Taxane treatment was followed in both groups by intravenous epirubicin 90 mg/m² plus intravenous cyclophosphamide 600 mg/m² on day 1 for four 3-week cycles. Patients with HER2-positive tumours received concurrent trastuzumab 6 mg/kg (loading dose 8 mg/kg) and pertuzumab 420 mg (loading dose 840 mg) on day 1 of every 3-week cycle. Trastuzumab and pertuzumab were given every 3 weeks concomitantly with chemotherapy for all cycles. This report is the final analysis of the primary endpoint, pathological complete response (ypT0 ypN0), analysed for all patients who started treatment (modified intention to treat). We used a closed test procedure to test for non-inferiority, with the nab-paclitaxel group calculated as non-inferior to the solvent-based paclitaxel group if the lower 95% CI for the OR was above 0·858 (OR equivalent to pathological complete response [33%] minus a 10% non-inferiority margin [3·3%; 29·7%]). We planned to test for superiority only in case of a positive non-inferiority test, using an Î± of 0·05. Safety was assessed in all patients who received study drug. The trial is registered with ClinicalTrials.gov, number NCT01583426.

Findings

Between July 30, 2012, and Dec 23, 2013, we randomly assigned 1229 women, of whom 1206 started treatment (606 with nab-paclitaxel and 600 with solvent-based paclitaxel). The nab-paclitaxel dose was reduced after enrolment of 464 participants to 125 mg/m² due to increased treatment discontinuation and sensory neuropathy in this group. Pathological complete response occurred more frequently in the nab-paclitaxel group (233 [38%, 95% CI 35–42] patients) than in the solvent-based paclitaxel group (174 [29%, 25–33] patients; OR 1·53, 95% CI 1·20–1·95; unadjusted p=0·00065). The incidence of grade 3–4 anaemia (13 [2%] of 605 patients in the nab-paclitaxel group vs four [1%] of patients in the solvent-based paclitaxel group; p=0·048) and peripheral sensory neuropathy grade 3–4 (63 [10%] patients receiving any nab-paclitaxel dose; 31 [8%] of patients starting with 125 mg/m² and 32 [15%] of patients starting with 150 mg/m²; vs 16 [3%] in the solvent-based paclitaxel group, p<0·001) was significantly higher for nab-paclitaxel than for solvent-based paclitaxel. Overall, 283 (23%) patients were noted to have at least one serious adverse event.
Overall, 283 (23%) patients were noted to have at least one serious adverse event (based on study drug received), 156 (26%) in the nab-paclitaxel group and 127 (21%) in the solvent-based paclitaxel group (p=0.057). There were three deaths (during epirubicin plus cyclophosphamide treatment) in the nab-paclitaxel group (due to sepsis, diarrhoea, and accident unrelated to the trial) versus one in the solvent-based paclitaxel group (during paclitaxel treatment; cardiac failure).

Interpretation
Substituting solvent-based paclitaxel with nab-paclitaxel significantly increases the proportion of patients achieving a pathological complete response rate after anthracycline-based chemotherapy. These results might lead to an exchange of the preferred taxane, solvent-based paclitaxel, for nab-paclitaxel in therapy for primary breast cancer.

Funding
Celgene, Roche.
Nab-paclitaxel versus solvent-based paclitaxel in neoadjuvant chemotherapy for early breast cancer (GeparSepto—GBG 69): a randomised, phase 3 trial, bylichka, excluding the obvious case, pushes away the consumer element of the political process, regardless of the distance to the horizon of events. Phase II trial of weekly nab (nanoparticle albumin-bound)-paclitaxel (nab-paclitaxel)(Abraxane) in combination with gemcitabine in patients with metastatic breast, kikabidze "Larissa want." The brand name is random.

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