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临床研究

Potential of a COX 2 inhibitor in lowering chemotherapy induced neutropenia

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摘要 Objective This study was initially designed to evaluate the effect of celecoxib on the regimen of 5 fluorouracil, epirubicin, and cyclophosphamide (FEC) combination, followed by docetaxel (T) in neoadjuvant setting. An unplanned preliminary review on safety was conducted after a halt of the study due to the concerned potential cardiovascular risk of using COX-2 inhibitors.Methods We studied 23 consecutive cases of operable breast cancer having received four cycles of FEC(500 mg/m 2, 100 mg/m 2, 500 mg/m 2) followed by four cycles of T(100 mg/m 2) with concurrent celecoxib (400 mg twice daily) (group A) or same chemotherapy regimen but without concurrent celecoxib (group B). These combined chemotherapies were administered every 3 weeks. The Chi square test or Fisher's exact test were used to assess the difference in incidence of limiting hematological toxicites between groups. Results 23 patients (group A:n=12; group B,n=11) received a total of 183 out of 184 planned treatment cycles; one (4%, 1/23) of them omitted the fourth cycle of FEC owing to repeated incidences of febrile neutropenia. Received dose intensity (RDI) for FEC in group A (90%±11%) was higher than that in group B (80%±8%) while RDI for T was similar between group A (93%±8%) and group B (96%±9%). Of the first 91 treatment cycles of FEC, limiting hematological toxicity, severe neutropenia including febrile neutropenia, was significantly different between group A and B [(10.4%, 5/48) vs.(32.6%, 14/43),P=0.009]. Other toxicities commonly observed in chemotherapy receiving patients were manageable.Conclusions Neoadjuvant use of FEC followed by T with concurrent celecoxib appeared to be safe for treatment of operable invasive breast cancer. The observed lower incidence of chemotherapy-induced neutropenia is possibly contributed by the administration of COX-inhibitor. We believe that further investigation might provide more evidence on the use of COX-2 inhibitors in breast cancer.

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