Biologics-naive juvenile idiopathic arthritis patients have elevated risk of cancer

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Biologics-naďve Juvenile Idiopathic Arthritis (JIA) patients may have an increased risk of cancer compared with the general Swedish population, according to research presented today at EULAR 2010, the Annual Congress of the European League Against Rheumatism in Rome, Italy. Results of an additional study, which researched a small cohort of patients showed an increased frequency of cancer in those receiving the biologic etanercept, however, results were deemed not statistically significant by researchers.

The results of a population-based Swedish cohort study found that the incidence of cancer among paediatric patients with JIA identified during the last 40 years was comparable to that seen in the general population, (0.5 vs. 0.4 cases per 1000 person years, Relative Risk (RR)=1.1, 95%CI 0.9-1.5). Subset analyses however indicated that subjects diagnosed with JIA since 1987 (the year that the Swedish patient registry attained nationwide coverage) were at elevated risk of developing cancer (RR=2.3, 95%CI 1.2-4.4, 13 JIA cancers vs. 30 in comparator), attributed to an increased occurrence of cancers of the lymphatic system (RR=4.2, 95%CI 1.7-10.7, 8 cancers in JIA vs. 10 in comparator).

"These results are intriguing and suggest that in the past 20 years, patients with JIA not treated with biological therapies appear to have an elevated risk of cancer compared with the general population," said lead author of the study Dr. Julia Simard, Clinical Epidemiology Unit, Karolinska Institute, Stockholm, Sweden. "The results of our study indicate that evaluation of cancer risks with biologics in paediatric

populations need to factor in differences in incidence of cancer between these patients and the general population. From a clinical point of view, it should be remembered that although we noted an increased risk in relative terms, the excess risks remain low in absolute terms."

The Swedish study assessed a national JIA cohort of 9,020 patients. For each JIA patient, up to five general-population comparators were identified (n=44,858). In the biologics-nad′ve JIA cohort, 60 cancers were observed during 131,144 person-years compared to 266 cancers during 661,758 person-years in the population comparator. Researchers noted that sensitivity analyses did not reveal an explanation for the differences seen between patients identified before and after 1987.

The results of the second study combined data on 1,721 patients treated with etanercept from three prospective JIA registries in Germany, the UK and the US. Of the 1,641 patients who qualified for the primary analysis, two cancers were reported. Whilst this yielded a rate higher than expected when compared to the general population, it was not statistically significant (RR estimated using a Standardized Incident Ratio (SIR) of 3.7 (0.5-13.4, 95%CI)). This is believed to be in part due to the low event rate. The interpretation of these findings may be further limited by the fact that the comparator rates were based on a general population and not a biologics-nad′ve JIA population, as per the Swedish study, which suggests this may indicate an increased underlying risk of cancer.

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