The effect of pregnancy on survival in a low-grade glioma cohort.

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Abstract

OBJECTIVE The impact of pregnancy on survival in female patients with low-grade glioma (LGG) is unknown and controversial. The authors designed a retrospective cohort study on prospectively collected registry data to assess the influence of pregnancy and child delivery on the survival of female patients with LGG. METHODS In Norway, the reporting of all births and cancer diagnoses to the Medical Birth Registry of Norway (MBRN) and the Cancer Registry of Norway (CRN), respectively, is compulsory by law. Furthermore, every individual has a unique 11-digit identification number. The CRN was searched to identify all female patients with a histologically confirmed diagnosis of World Health Organization (WHO) Grade II astrocytoma, oligoastrocytoma, oligodendroglioma, or pilocytic astrocytoma who were 16-40 years of age at the time of diagnosis during the period from January 1, 1970, to December 31, 2008. Obstetrical information was obtained from the MBRN for each patient. The effect of pregnancy on survival was evaluated using a Cox model with parity as a time-dependent variable. RESULTS The authors identified 65 patients who gave birth to 95 children after an LGG diagnosis. They also identified 281 patients who did not give birth after an LGG diagnosis. The median survival was 14.3 years (95% CI 11.7-20.6 years) for the entire study population. The effect of pregnancy was insignificant in the multivariate model (HR 0.71, 95% CI 0.35-1.42). CONCLUSIONS Pregnancy does not seem to have an impact on the survival of female patients with LGG.

KEYWORDS: CRN = Cancer Registry of Norway; HGG = high-grade glioma; ICD-O-3 = International Classification of Diseases for Oncology, third revision; LGG = low-grade glioma; MBRN = Medical Birth Registry of Norway; VDE = velocity of diametric expansion; glioma; neurooncology; oncology; pregnancy

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