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Letter to Editor

Glioblastoma Near High-voltage Overhead Power Lines

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Summary

We aim to discuss the effect of high-voltage overhead power lines on glioblastoma formation.

Key words: Brain tumor, glioblastoma, high-voltage power lines

Yüksek gerilim hatları çevresinde glioblastoma

Özet

Glioblastoma gelişiminde yüksek gerilim hattının etkisini tartışmayı amaçladık.

Anahtar Kelimeler: Beyin tümörü, glioblastom, yüksek gerilim hattı

Industry is a doubled edged sword for human health. The incidence of brain tumors has been progressively increasing in the industrialized countries in recent years[2]. The reason for the increased incidence and prevalence in the industrialized countries is unknown; it is believed that it may be attributed to improvements in diagnostic tests and neuroimaging.

Overhead power lines are the dominant source of exposure to magnetic fields. In a case-control study for investigating the risk of adult cancers in relation to distance and extremely low-frequency magnetic fields from high-voltage overhead power lines, the authors concluded that their results did not support an epidemiologic association of adult cancers with residential magnetic fields in proximity to high voltage overhead power lines[1]. Living <50 meter close to high-voltage power lines increased the risk of childhood leukaemia, but after adjustment for deprivation and other confounders, no excess risk was detected for brain/central nervous system cancers in relation to distance or magnetic fields from high-voltage overhead power lines[1,4]. Exposure to electromagnetic fields from mobile phone is under investigation because of its potential health effects. A recent study pointed that using mobile or cordless phone before the age of 20 have the risk of glioma development especially in the temporal lobe[3].

In our series of 541 (369 high grade and 172 low grade) glial tumor patients that were operated by the senior author 4 of the patients were a member of 3 families. The high voltage lines were passed over two of these patients' house. The other two patients were spouse and there were no relation. The most important detectable factor was the close settlement of the patients' house to the high voltage lines (30mt). All of the patients were living in the same adress over 15 years.

Our results do not support an epidemiologic association of glioblastoma with proximity to residential magnetic

fields from high-voltage overhead power lines, but our findings should help to settle a debate on the safety of residential exposures from high voltage overhead power lines and glioblastomas.

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