Subependymal giant cell astrocytoma case reports

A 21-year female patient with large bilateral angiomyolipoma (AML) in both kidneys with the longest diameter more than 12.3 cm and subependymal giant cell astrocytoma (SEGA). Treatment with everolimus (EVE) was initiated at a dose of 10.0 mg/day and continued during the following 3 years. Magnetic resonance imaging (MRI) was performed before treatment with everolimus was initiated, and consequently at 12 and 36 months for follow-up of the efficacy of the treatment. After 3 years, the total size of the largest AML decreased by ~24.0% in the longest diameter. A reduction in the total size of SEGA was also observed. The most common adverse effect of treatment was stomatitis grades 3 to 4 and one febrile episodes associated with a skin rash that required a reduced dose of EVE. In conclusion, the everolimus treatment improved even such a large renal AML and the effect persisted during the long-term administration with a small number of adverse effects. A positive effect was observed on the brain tumor as well [1)].

A seven-year-old boy with a large, symptomatic SEGA which was treated acutely with everolimus.

Everolimus treatment resulted in rapid reduction in tumor size, symptomatic improvement, and decrease in cerebrospinal fluid protein.

Everolimus can effectively reduce tumor size, decrease cerebrospinal fluid protein, and allow successful ventriculoperitoneal shunt placement without the need for surgical resection of a symptomatic SEGA [2)].

A case is described of a subependymal giant cell astrocytoma that occurred as a mural nodule within a cyst in the parietal lobe. The tumor recurred twice over a period of 47 years despite two extensive surgical resections. Neither the patient nor any of his children suffered tuberous sclerosis [3)].

1)
Rambabova Bushljetik I, Lazareska M, Barbov I, Stankov O, Filipce V, Spasovski G. Bilateral Renal Angiomyolipomas and Subependymal Giant Cell Astrocytoma Associated with Tuberous Sclerosis Complex: a Case Report and Review of The Literature. Balkan J Med Genet. 2021 Mar 23;23(2):93-98. doi: 10.2478/bjmg-2020-0017. PMID: 33816078; PMCID: PMC8009567.
2)
Arroyo MS, Krueger DA, Broomall E, Stevenson CB, Franz DN. Acute Management of Symptomatic Subependymal Giant Cell Astrocytoma With Everolimus. Pediatr Neurol. 2017 Jul;72:81-85. doi: 10.1016/j.pediatrneurol.2017.04.008. Epub 2017 Apr 18. PubMed PMID: 28511812.
3)
Halmagyi GM, Bignold LP, Allsop JL. Recurrent subependymal giant-cell astrocytoma in the absence of tuberous sclerosis. Case report. J Neurosurg. 1979 Jan;50(1):106-9. PubMed PMID: 758371.