

Immunohistochemical study of solitary fibrous tumor in the ear related to pazopanib use

Toshiaki Kawano¹, Takashi Hirano¹, Maki Fujinaga¹, Yoshinori Kadowaki¹, Takayuki Matsunaga¹, Kaori Tateyama¹, Yumi Kizu¹, and Masashi Suzuki¹

¹Oita University

November 21, 2020

Abstract

This is the first report using an anti-tumor drug called Pazopanib for a case of solitary fibrous tumor that occurred in the ear canal. Pazopanib will be useful for clinicians involved in this case in the future, we have reported the detailed progress and immunological analysis.

Hosted file

Immunohistochemistry of solitary fibrous tumor in the external auditory canal after using pazopanib, Ma available at <https://authorea.com/users/377598/articles/494251-immunohistochemical-study-of-solitary-fibrous-tumor-in-the-ear-related-to-pazopanib-use>

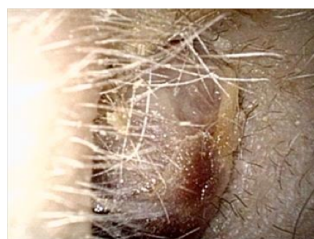


Figure 1-1 : White, elastic and soft mass lesion occupying the right ear canal.

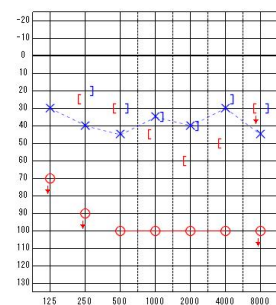


Figure 1-2 : A pure tone hearing test showed a mild sensorineural threshold increase on the left ear and an advanced conductive deafness with an average threshold threshold of 100 dB on the right ear.

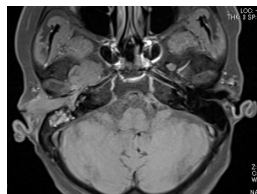


Figure 2-1

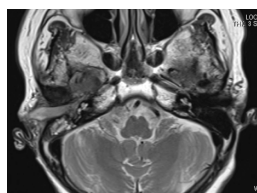


Figure 2-2

Figure 2-1, 2-2 : In the right external auditory meatus, a 28×10 mm T1WI low signal (Fig 2-1) and a T2WI high signal showed a non-uniform tumorous lesion with contrast effect (Fig 2-2).

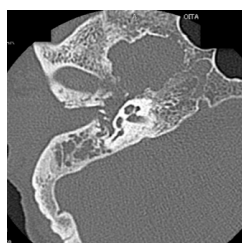


Figure 2-3 : A mass lesion of 18×25 mm was observed from the base of the middle fossa to the external auditory meatus to open the foramen ovale. Bone destruction of the foramen ovale, spinous foramen, and carotid canal was also associated.

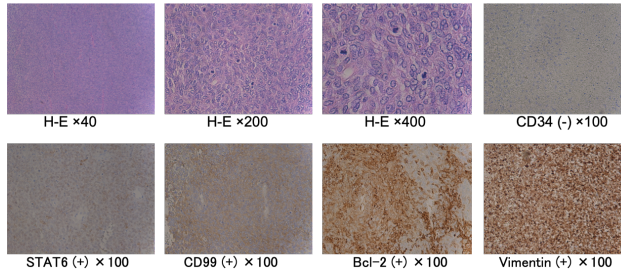


Figure 3

CD34(-), but STAT6(+), CD99(+), bcl-2(+), vimentin(+), and hematoxylin-eosin (HE) staining shows a large number of cell divisions of 9 cells/HPF. The diagnosis was Solitary fibrous tumor, Grade III.

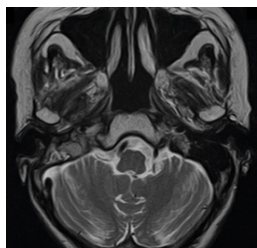


Figure 4-1 : One month after two cyberknives were performed, MRI showed a tendency for tumor growth from the middle fossa to the external auditory meatus, and chemotherapy with cetuximab/CDDP/5-FU was started.



Figure 4-2 : Further tumor growth was observed on MRI after 10 courses of cetuximab.



Figure 5-1 : MRI before using pazopanib.

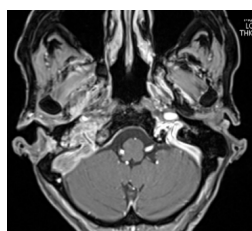


Figure 5-2 : An evaluation MRI 3 months after the start of pazopanib showed an increase in the mass from the right midcranial fossa to the foramen ovale, but an irregular mass in the external auditory meatus had decreased.

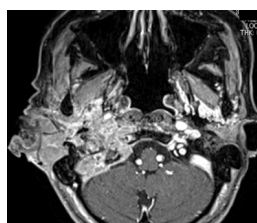


Figure 5-3 : A further tumor growth was observed on MRI 6 months after the start when the dose of pazopanib was reduced due to side effects.

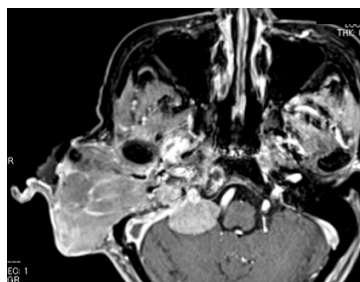


Figure 6-1 : After 4 courses of nivolumab treatment, MRI showed further tumor growth.



Figure 6-2 : The tumor significantly increased from the ear canal to the outside and showed a tendency to bleed.

Hosted file

Pazopanib figure 7.pdf available at <https://authorea.com/users/377598/articles/494251-immunohistochemical-study-of-solitary-fibrous-tumor-in-the-ear-related-to-pazopanib-use>