Letter

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Brain abscess in an angiosarcoma patient during a disease-free interval

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Summary **This is the first case of an angiosarcoma patient with brain abscess, and it might be responsible for skin defect and cranial bone necrosis by surgical excision and radiation. Our patient was treated with 10 courses of triweekly paclitaxel therapy, radical radiotherapy (70 Gy), and surgical excision (2 cm margin apart from a lesion) for angiosarcoma. At two years after the operation he was diagnosed as brain abscess. Brain abscess was managed with antibiotic drugs and drainage, his clinical symptoms improved by these treatments. He achieves replace free survival without the exacerbation of angiosarcoma and brain abscess for three years.**

Keywords: Angiosarcoma, brain abscess, multimodality therapy

Although standard treatment strategies are yet to be established for scalp angiosarcoma, the current multimodality therapy generally consists of surgery, radiotherapy and chemotherapy (*1*). Skin defects due to radiotherapy and surgery often reduce quality of life. Here, we describe our first experience of an angiosarcoma patient with a brain abscess, and how it may be responsible for skin defects and cranial bone necrosis resulting from surgical excision and radiation.

A 76 year-old man was diagnosed with scalp angiosarcoma without lymph node or organ metastasis. The patient was treated with 10 courses of tri-weekly paclitaxel therapy, radical radiotherapy (70 Gy), and surgical excision (2 cm margin from the lesion). As no recurrence was identified in one year after surgery, we tried to reconstruct the skin defects with tissue expander. However, we could not perform surgical reconstruction because of the expander infection.

Two years after the initial operation, he suffered from a sudden onset of right-sided hemiplegia, emesis, and disturbance of consciousness. Brain magnetic resonance imaging revealed a 50-mm ring-enhancing lesion in the left frontal lobe and a small amount of air in the lesion site, which was not compatible with invasive angiosarcoma but rather a brain abscess (Figure 1a). Although the brain abscess was initially managed with antibiotics (vancomycin and meropenem), his consciousness gradually worsened after 5 days of conservative treatment. Computed tomography revealed his brain abscess had enlarged, and emergency drainage of the abscess was performed. The pus liberated from the site was yellowish-white and viscous (Figure 1b). Bacterial cultures of the brain abscess specimens revealed an infection with *Finegoldia magna*. His clinical symptoms improved within 24 hours of emergency drainage. At two months after drainage, we performed sequestrectomy of the cranial bone and performed reconstructive surgery using the free rectus abdominis myocutaneous flap to cover the exposed lesion. He achieved incident-free survival without the recurrence of the angiosarcoma or brain abscess for three years.

To our knowledge, the only other case of a cerebral lesion in an angiosarcoma patient was a case with pneumocephalus (*2*). This is the first published case describing a brain abscess in an angiosarcoma patient. Abscess formation could be due to large skin defects and cranial bone necrosis resulting from surgery and radiation. Recently, combination therapy with radiotherapy and taxane significantly prolonged overall

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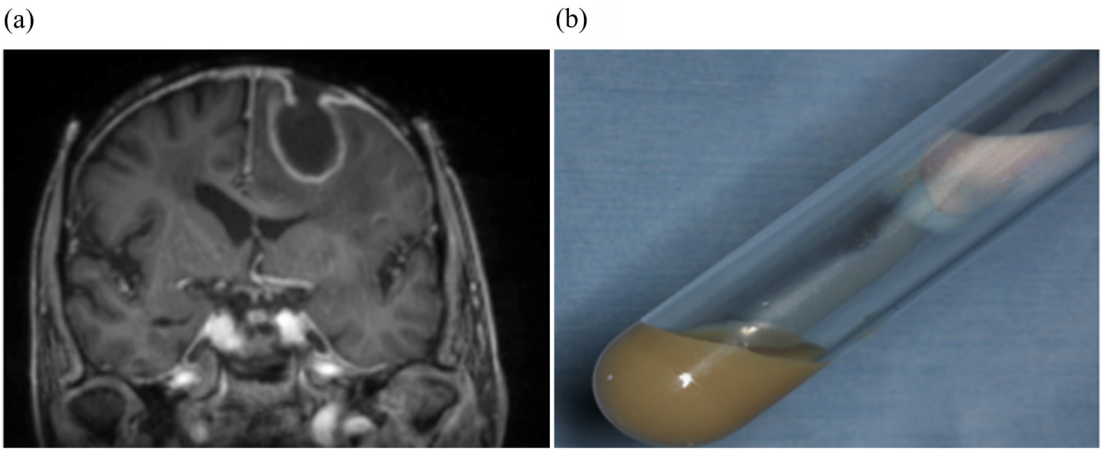

Figure 1. (a) Brain magnetic resonance imaging showing a 50-mm ring-enhancing lesion in the left frontal lobe. (b) Emergency drainage of brain abscess revealed yellowish-white viscous fluid.

survival following surgery (*3*), which may indicate that surgery with large skin defects is not necessary for angiosarcoma. In conclusion, further studies are required to establish a more effective treatment regime for angiosarcoma with fewer side effects.

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