



## Pathology Page

## Mycotic aneurysm

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A 33-year-old man with no previous medical problems, came to a local hospital because of cough and fever. A blood culture revealed  $\alpha$ -hemolytic streptococcus. Infective endocarditis was highly suspected and he was referred to National Taiwan University Hospital for further management. Right side weakness and shortness of breath developed the following day. A brain computed tomography scan 1 week later showed an intracranial

hemorrhage. The patient lost consciousness (E4V1M4) the next day, and computed tomography angiography showed a ruptured aneurysm in the middle cerebral artery. He was transferred to our hospital 10 days later and died of sepsis 1 month after that. At autopsy, a huge vegetation coating the aortic valve (5.0 cm) was noted. Incidentally, a  $2.0 \times 1.5 \times 1.5$  cm mesenteric aneurysm with blood clots was found (Fig. 1A). Histopathology revealed arterial

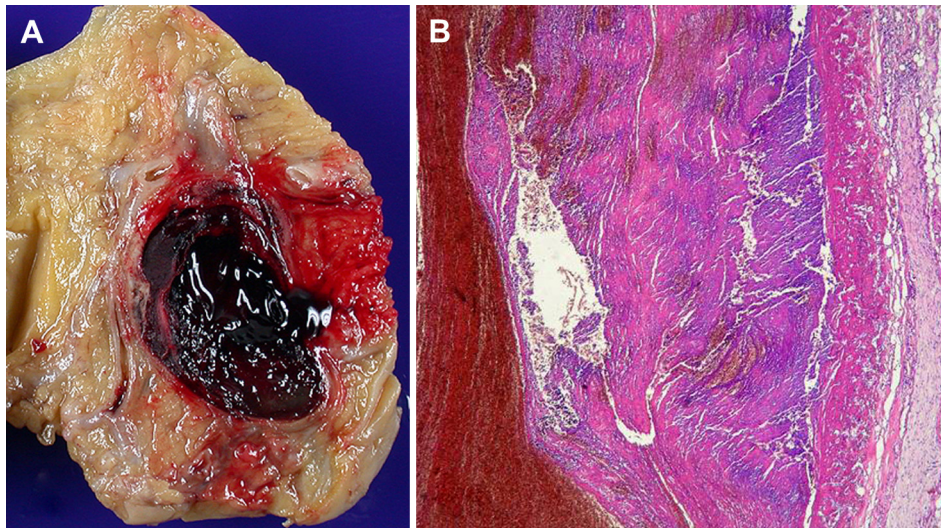


Fig. 1. (A) A huge  $2.0 \times 1.5 \times 1.5$  cm mycotic aneurysm. (B) Histopathology reveals arterial wall destruction and dilatation consistent with a mycotic aneurysm.

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wall destruction and dilatation consistent with a mycotic aneurysm (Fig. 1B).

Formation of mycotic aneurysms may be caused by direct bacterial invasion, embolic occlusion, or injury due to deposition of immune complexes. Between 2.5% and 10% of cases of endocarditis

are complicated by mycotic aneurysms. The most frequent sites of involvement for mycotic aneurysms are the cerebral arteries and aorta. Aneurysms of the superior mesenteric artery and its branches are extremely uncommon, comprising 8% of all visceral artery aneurysms. More than 60% of these aneurysms are infective in origin, with *Staphylococcus* and *Streptococcus* being the most common microorganisms.

#### Further reading

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