

# Endovascular treatment of cerebral aneurysms in the era of new device

## - Balloon is not an old legacy for aneurysm treatment

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### Purpose:

Nowadays, endovascular treatment of cerebral aneurysms is the most popular treatment of them. And recently many new devices, such as flow diverter or intrasaccular flow disruptor, are invented and applied clinically, in order to improve the result for the large or giant aneurysms and wide neck aneurysms. However, conventional intrasaccular coil embolization with some adjunctive technique (balloon assisted or stent assisted technique) is still useful for some aneurysms. In this report, we try to show balloon assisted coil embolization is not an old legacy for aneurysm treatment.

### Methods:

We will present conventional intrasaccular coil embolization with or without some adjunctive technique, and then new approach using flow diverter or intrasaccular flow disruptor. And we try to analyze the ratio of treatment method of cerebral aneurysms by conventional coil embolization or by using new device, from our experience of Dokkyo Medical University Saitama Medical Center and my personal experience. We compare the results at intervals of ten years. We also count how often we use the balloon assisted technique for coil embolization.

### Results:

The number of conventional intrasaccular coil embolization with some adjunctive technique is decreasing as time goes by, comparing with the number of the cases with the new approach using flow diverter or intrasaccular flow disruptor. However, conventional intrasaccular coil embolization is still useful for many aneurysms, especially for with balloon assisted technique. And for difficult aneurysms such as large or giant aneurysms and wide neck aneurysms, the new approach using flow diverter or intrasaccular flow disruptor is effective and better method.

### Conclusions:

Endovascular treatment of cerebral aneurysms is greatly in progress and it is one of the first choice treatments for the cerebral aneurysms. Recently the time is changing and many new devices, such as flow diverter or intrasaccular flow disruptor, are invented and applied clinically. However, balloon assisted coil embolization is still useful and it is not an old legacy for aneurysm treatment.