Scalp cirsoid aneurysm treatment

The treatment of sAVF is difficult, and many therapeutic approaches have been proposed. General approaches for the treatment of sAVF include ligation of the feeding arteries, surgical removal, electrothrombosis, embolization, and a combination of these approaches.

Although surgical excision is considered as definitive treatment for these lesions, troublesome intraoperative bleeding may pose a challenge.

Embolization as an alternative modality is gaining popularity.

Although most SAVMs can be operated by traditional method of excision, use of temporary clipping of feeding arteries (like Superficial temporal artery[STA], External carotid artery[ECA]) enables total excision of giant SAVMs with minimal blood loss for a definitive cure. This technique obviates the need for preoperative embolization ¹⁾.

In a systematic review, a total of 58.5% of cases scalp cirsoid aneurysm were managed with surgical excision only, 21.6% with endovascular embolization only, and 14.5% with a combination of both methods.²⁾.

The commonest artery involved in the scalp cirsoid aneurysm is the superficial temporal artery, due to its long and twisted course. The different methods of treatment include 'en bloc' resection and primary closure of the lesion, and sclerotherapy in which sodium tetradecyl sulfate is injected into the unwanted vessels with carbon dioxide gas, and the vessel is made to undergo sclerosis. The latter is associated with complications such as thromboembolism, allergy and skin necrosis. Direct puncture endovascular embolization, using either chemical NBCA, absolute alcohol or mechanical coils, is another effective method widely used for AVM correction and an old method of ligation of feeding arteries, which is associated with the formation of collaterals and recurrence ³⁾.

Heiferman published a case of a patient who underwent transvenous endovascular embolization followed by surgical excision via a bicoronal incision, as shown in a operative video. Care was taken to identify, cauterize, and transect feeding vessels from the superficial temporal, supratrochlear, and supraorbital arteries circumferentially to completely devascularize and resect the galeal nidus from overlying scalp tissue and underlying pericranium. Previously unreported in the literature, transosseous emissary veins partially draining the lesion was noted on angiography and were waxed thoroughly during surgery ⁴⁾.

Although most SAVMs can be operated by traditional method of excision, use of temporary clipping of feeding arteries (like Superficial temporal artery[STA], External carotid artery[ECA]) enables total excision of giant SAVMs with minimal blood loss for a definitive cure. This novel technique obviates the need for preoperative embolization ⁵.

Munakomi et al. presented one case where staged embolization, excision, and subsequent grafting was done $^{6)}$.

Percutaneous injection of sotradecol can be considered as one of the treatment options for arteriovenous fistula of the scalp. Further experience is needed to compare the safety and effectiveness of sotradecol with other agents currently used in the treatment of scalp arteriovenous fistulae ⁷⁾.

Cirsoid aneurysms of the facial region, an uncommon cause of tinnitus, can be effectively managed by endovascular embolisation. This treatment obviates the need for surgery, which is associated with an increased risk of complications such as scarring, deformity and bleeding⁸.

Well-planned surgery of cirsoid aneurysm of the scalp without preoperative interventions could achieve complete excision of the lesion without any residual masses or recurrence and with a low incidence of complications 9 . 10 .

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