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Management of Intracranial AVMs in the Elderly.

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Introduction

With remarkable advances in endovascular technology, radiation therapy, as well as microsurgical techniques, multi-modality management of bAVMs has proven effective and safe across various age groups. However, the recent publication of the first randomized trial of unruptured AVMs, ARUBA (A Randomized trial of Unruptured Brain AVMs), has generated controversy in regards to the optimal treatment strategy for bAVMs. We sought to determine the ideal treatment strategy for elderly patients harboring bAVMs by reviewing our experience with AVMs in the elderly population.

Methods

Henry Ford AVM database was queried from 1990 to 2014 to identify 28 elderly patients (age > 65 years) with pial AVMs. Data including age, gender, and symptoms upon presentation, presence of ICH on CT, flow-related aneurysms, and utilized treatment options (embolization, microsurgery, and SRS) was gathered. Spetzler-Martin (SM) grade was applied to all patients to assess surgical risk. All patients received 6-vessel cerebral angiography to assess AVM obliteration status after treatment. Medical records were carefully screened to assess patient functional outcomes prior to treatment and later in the follow-

Results

There were 9 male (32%) and 19 female (68%) patients, with an average age of 73.0 ± 6.95 years. The most common symptoms on presentation were hemorrhage (36%) and headaches (18%). The bAVMs were equally distributed between the supra- and infra-tentorial compartments. The most common Spetzler-Martin (SM) grade was II, seen in 57% of the patients. Eleven patients (39.3%) underwent surgical resection, four patients (14.3%) had stand-alone radiation therapy, 13 patients (46%) did not receive treatment or were managed expectantly, and four patients (14.3%) were lost to follow-up. Complete obliteration rate was achieved in 87% of the surgical patients. None of the patients who received any form of treatment died; overall mortality rate was 3.6%.

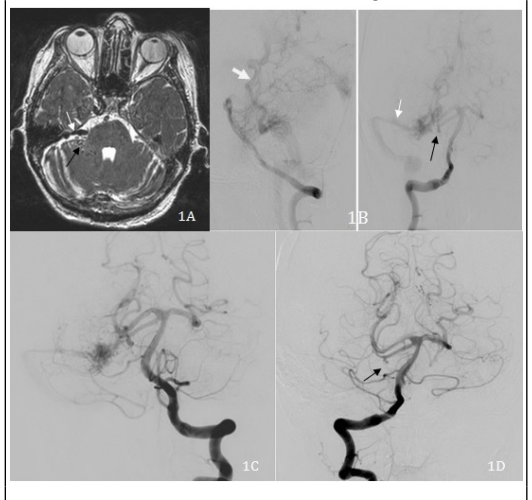
Conclusions

This represents the largest cohort of patients aged > 65 years harboring brain AVMs and shows that multimodality treatment of ruptured and unruptured AVMs in this population can be undertaken with a favorable risk-safety profile. Studies with larger data cohorts are needed to confirm these findings.

Learning Objectives

By the conclusion of this session, participants should be able to recognize that advanced age should not be considered a limiting factor when managing AVMs in elderly population and that multimodal therapy can yield excellent outcomes in well - selected patients.

Intracranial AVM in Elderly Patient



Surgical Exicision of Posterior Fossa AVM in an Elderly Patient

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