Cerebral Aneurysm - A Woman´s Affair?

Andreas Gruber, Department of Neurosurgery, Johannes Kepler University Linz

Cerebral saccular aneurysms are acquired rather than congenital cerebrovascular pathologies, affecting approximately 4% of the adult western Caucasian population. Patients harbouring cerebral aneurysms may suffer subarachnoid hemorrhages from aneurysm rupture. The risk of hemorrhage is related to aneurysm size, with aneurysms smaller than 7 mm having an comparably low risk and giant aneurysms, i.e. lesions larger than 25 mm are considered rupture prone. Among the predisposing factors for aneurysm development over time are modifyable and non modifyable parameters. Whereas life style related parameters as hypertension and smoking are clearly modifyable risk factors, female gender and Japanese offspring have to be considered non modifyable factors. Whereas the risk for aneurysm development as well as subarachnoid hemorrhage does not differ between male and female patients before the age of 50 years, a significant “gender gap” is observed thereafter, with female patients developing aneurysms more frequently and subsequently suffering subarachnoid hemorrhages more frequently than male patients. Several lines of evidence indicate, that aside from modifyable risk factors more frequently encountered in the male population, endocrine menopausal changes may directly affect remodeling processes of the arterial wall and may facilitate aneurysm formation in the female population.