Of small vessels and big consequences

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Nothing to disclose
The bloody brain
We found that previous vascular events and presence of atherosclerosis were associated with a shift of the total population distribution towards lower levels [of cognitive function].

It seems timely to conduct a study to investigate whether intervention on risk factors for atherosclerosis can prevent cognitive decline on a population level.
Brain atrophy
White matter lesions
Brain infarcts

Twenty-year changes in dementia occurrence suggest decreasing incidence in central Stockholm, Sweden
Over the last decades:

Dementia became Alzheimerized

And Alzheimer disease became amyloidized
Prioritized Recommendations

Basic Mechanisms and Experimental Models

Vascular contributions to ADRD - focus on small vessel disease and AD/vascular interactions (VAS)

1. Develop next-generation experimental models of VCI and VaD (3-7y).

2. Encourage basic science research that investigates the impact of AD risk factors on cerebrovascular function (3-7 y).

3. Encourage basic science research that investigates the impact of cerebrovascular risk factors on AD-related neurodegeneration (3-7 y).

Human-Based Studies

1. Develop (1-3 y) and validate (3-7 y) noninvasive markers of key vascular processes related to cognitive and neurologic impairment.

2. Determine interrelationships among cerebrovascular disease and risk factors, Aβ, and neurodegeneration (3-7 y).

3. Identify next generation vascular interventions to treat or prevent VCI and VaD (7-10 y).

http://www.ninds.nih.gov/funding/areas/neurodegeneration/workshops/adrd2013/
Further recommendations/caveats:

• More interdisciplinary research: needs special incentives

• Harmonization and standardization of methods: THERE IS INFORMATION IN VARIATION

• Learn from the Alzheimer field: complex diseases rarely have simple remedies

• Money makes the world go round: we will need big bucks, to make big impacts
Get out of those silos!