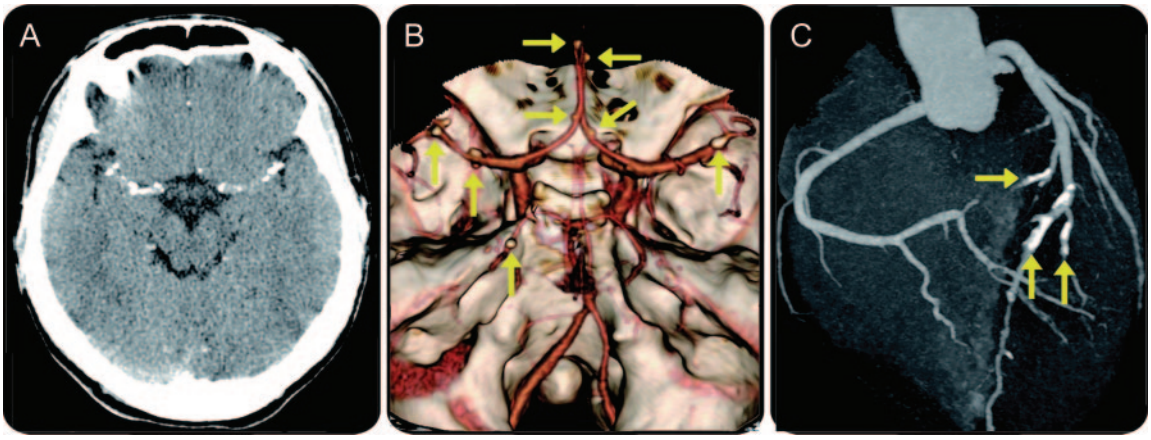
Premature intracranial arterial calcification in a patient with hyperhomocysteinemia

Figure Calcifications in intracranial and coronary arteries in a patient with hyperhomocysteinemia



Nonenhanced brain CT (A) and CT angiography (B) show multifocal calcifications (arrows) in both middle cerebral arteries, anterior cerebral arteries, and right posterior cerebral artery. (C) CT coronary artery also shows calcified plaques (arrows) in left anterior descending artery.

A 24-year-old, normotensive, nonsmoking man developed dysarthria and left hemiparesis. Brain MRI showed scattered infarcts in the right frontal and parietal areas. Brain and coronary CTs showed multifocal calcifications in intracranial arteries (figure, A and B) and left anterior descending coronary artery (figure, C). Laboratory results including serum glucose, calcium, cholesterol, parathyroid hormones, thyroid function tests, and parasite antibodies were all within normal limits. His homocysteine level was 34.8 μmol/L (normal, up to 15) and MTHFR C677 genotype was TT homozygous. As shown in previous reports of coronary artery calcification,[1,2] high homocysteine level may be related to patient's intracranial arterial calcifications.

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