

Intraplaque hemorrhage on carotid mri in stroke patients

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Intraplaque Hemorrhage on carotid MRI in stroke patients: on the Road Towards Clinical Application

Mohamed Kassem

Maastricht, 12 December 2023

1. Intraplaque hemorrhage is caused by the entry of blood from the vascular lumen through fissures or ruptures in the fibrous cap. (this thesis)
2. Carotid intraplaque hemorrhage does not show an increase over a two-year period in stroke patients who initiated antiplatelet treatment after the event compared to those who had already their antiplatelet medication. (this thesis)
3. Routinely acquired mask images from CE-MRA can be used to visualize IPH. (this thesis)
4. MATCH images of carotid plaque acquired with a single 5-minute scan, are suitable for scoring plaque components like the presence of a lipid-rich necrotic core and intraplaque hemorrhage. (this thesis)
5. Incorporating MRI for detecting carotid IPH into the clinical care of ischemic stroke patients with carotid artery disease will facilitate personalized treatment. (impact)
6. In clinical trials, imaging endpoints can provide objective measures of treatment efficacy, helping to bring new therapies to the market.
7. Randomized control trials are required to assess the benefit of carotid revascularization in patients with a high-risk plaque, such as plaques with intraplaque hemorrhage (IPH).
8. One day, evaluation of plaque characteristics will be part of standard clinical care, rather than solely relying on the degree of stenosis, in patients with ischemic cardiovascular diseases.
9. Science is the art of asking 'why' and the skill of finding 'how'.
10. "Life isn't about finding yourself. Life is about creating yourself." - George Bernard Shaw