Cerebral embolism from subclinical carotid atherosclerotic lesion in a young woman with inflammatory Crohn disease

Marianne Lafitte1*, Sabrina Debruxelles2, Igor Sibon2, François Rouanet2, and Thierry Couffinhal1

1CEPTA, CHU Haut Leveque, Pessac and Victor Segalen University, Bordeaux, France and 2Stroke Unit, CHU Pellegrin and Victor Segalen University, Bordeaux, France

* Corresponding author. Tel: +33 557 656 270, Fax: +33 557 656 271, Email: marianne_lafitte@hotmail.com

A 39-year-old woman was hospitalized for sudden massive left hemiplegia. Her only risk factor was light smoking. She was diagnosed with Crohn disease 1 month before, and treated with corticoids. Early angio-computed tomographic (CT) scan and magnetic resonance imaging (MRI) showed large sylvian cerebral ischaemia, right sylvian artery thrombosis and suggested the existence of intraluminal right carotid bulb abnormality (Panel A). Ultrasound examination refined the abnormality as being a large mobile thrombus adherent to the posterior wall of the right bulb (Panel B). She was treated with heparin leading to lysis of the thrombus 7 days later (Panel C). A small plaque at the site of previous thrombus adhesion was visualized. After 1 month of Coumadin treatment, ultrasound confirmed the presence of a tiny ulcerated plaque (Panel D).

Laboratory investigations showed evidence of systemic inflammation. Traditional risk factors were normal. Serological examination for vasculitis-associated antibodies was negative.

A few cases of cerebrovascular complications in patients with Crohn disease have been published and were related to Crohn-associated vasculitis and/or consequence of hypercoagulability. Evidence of atherosclerotic aetiology has never been previously shown. Atherosclerosis is a chronic disease of the arterial wall where inflammation is central at all stages. This case illustrates the mechanism of stroke in a young woman with active inflammatory Crohn disease and high pro-thrombotic condition, due to small atherosclerotic plaque ulceration and thrombus embolization. It emphasizes the prominent role of carotid ultrasound in such cases.