Introduction: Carotid artery dissection (CAD), although relatively uncommon in the general population, is the most common single etiology of ischaemic stroke (IS) in young adults. The specific role of vascular risk factor profile in CAD is poorly understood and intriguing.

Case Report: A 46 year-old woman presented with sudden onset of left hemiparesis. This followed an episode of frontal headache. Her medical history included being overweight, current smoking, combined oral contraceptive use, thyroiditis that lead to hypothyroidism medicated with levothyroxine 100 micrograms, mixed dyslipidaemia under lifestyle intervention and hypertension under study. Obstetric history: 1 pregnancy, 1 childbirth, uneventful. On physical examination, left dysmetria on finger-to-nose-test and pathologically brisk osteotendinous reflexes. Brain computed tomography imaging was normal. Brain magnetic resonance imaging (MRI) and MR angiography revealed IS in the territory of the right middle cerebral artery with ipsilateral carotid dissection. From the etiological study carried out, including an analytical study with immunology, serology and imaging, only the aforementioned conditions were detected. She initiated anti-aggregation and, subsequently, hypo-coagulation with warfarin demonstrating good evolution.

Conclusion: It is crucial to improve the understanding of the mechanisms of CAD, as it is a major cause of IS in young adults, in whom the impact of stroke can be truly dramatic. Although the link between environmental factors and CAD remains speculative, some precipitating events are associated with CAD such as tobacco use, hypertension and the oral contraceptive use. Hypercholesterolemia appears to have an inverse association, which may have implications for follow-up and secondary prevention.