

# The Complex Decision of Initiating CGRP Monoclonal Antibodies in a Patient with a History of Ischemic Stroke due to Vertebral Artery Dissection

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## INTRODUCTION

Migraine is a common disabling primary brain disorder that predisposes to recurrent attacks of headache, as well as sensory, limbic, and homeostatic symptoms in genetically susceptible individuals. There are multiple classes of effective preventive treatments, including antihypertensive medications, antidepressants, and antiseizure medications [1]. Since 2018, medications targeting the calcitonin gene-related peptide (CGRP) pathway, including monoclonal antibodies (CGRP-mAbs) and oral CGRP receptor antagonists, have been introduced. Although CGRP-mAbs are generally well tolerated, concerns remain regarding their use in patients with a history of vascular events (i.e., stroke, myocardial infarction etc.), due to CGRP's vasoprotective role [2]. Here we report a case of a patient with a history of ischemic stroke caused by vertebral artery dissection who was treated with a CGRP-mAb.

## METHODS

A 74-year-old female patient came to our clinic with a history of chronic migraine that began at a young age. Her past medical history included hypertension and surgically treated ovarian cancer. Almost 10 years ago, she experienced a non-disabling ischemic stroke in the left cerebellar hemisphere caused by a traumatic dissection of the vertebral artery which occurred during a physiotherapeutic session. Despite multiple preventive treatments for migraine, including beta-blockers, antidepressants, and anticonvulsants, none proved effective. Given the traumatic and localized nature of the stroke, it was decided to start preventive therapy with a CGRP-mAbs. After few years, a brain MRI performed for worsening headaches revealed new ischemic lesions suggestive of chronic microvascular disease. CGRP-mAb therapy was discontinued, and low-dose acetylsalicylic acid was started. Subsequently, anticardiolipin antibodies were detected, raising the suspicion of antiphospholipid antibody syndrome. Following the treatment change, the patient reported a marked improvement in the frequency and severity of migraine attacks.

## DISCUSSION AND CONCLUSIONS

To date, no definitive evidence links CGRP-mAbs to an increased risk of cerebrovascular events. Nonetheless, the European Headache Federation recommends caution in patients with vascular comorbidities or a history of vascular disease [3]. This case illustrates the complexity of decision-making in such scenarios and underscores the importance of comprehensive vascular risk assessment even in cases where ischemic events are attributed to trauma. Further research and detailed guidelines are needed to support clinicians in managing patients with overlapping migraine and vascular pathologies.

## REFERENCES

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