

## Diagonal Earlobe Crease Revealing Intracranial Atherosclerosis

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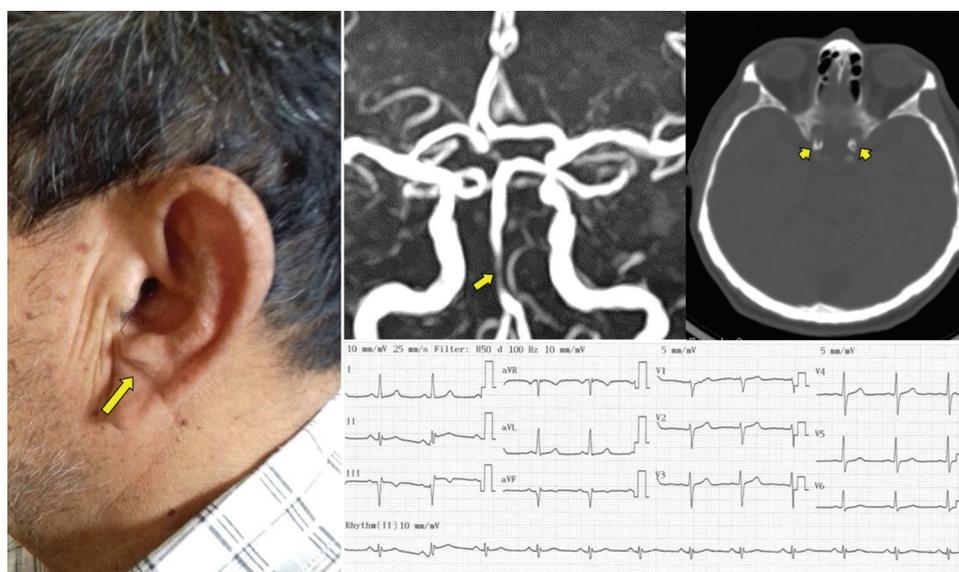
An asymptomatic 76-year-old man with arterial hypertension and an old myocardial infarction was evaluated after providing signed informed consent for being enrolled in the Atahualpa Project, a population-based cohort study designed to reduce the increasing burden of noncommunicable cardiovascular and neurological diseases in rural Ecuador.<sup>[1]</sup> Physical examination was remarkable for the presence of a diagonal crease in the left earlobe (known as Frank's sign) [Figure 1, left], which has been associated with increased risk of atherosclerotic disease.<sup>[2]</sup> A 12-lead electrocardiogram confirmed the presence of an inferior myocardial infarction [Figure 1, right lower panel]. Time-of-flight magnetic resonance angiography showed severe segmental stenosis of the basilar artery, and high-resolution computed tomography with bone

window settings revealed the presence of high calcium content in both carotid siphons (a recognized surrogate of intracranial atherosclerosis) [Figure 1, right upper panel].

Diagnosis of most neurological diseases requires the use of sophisticated technology, which is not available in rural areas. The Frank's sign might be used as a simple tool to identify candidates for the practice of neuroimaging studies in research studies conducted in remote rural settings. This will help identify apparently healthy individuals at risk for developing catastrophic diseases before they occur.

### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the



**Figure 1:** Photograph of the patient showing a diagonal earlobe crease (large arrow), magnetic resonance angiography showing severe segmental stenosis of the basilar artery (short arrow), computed tomography showing severe calcification of both carotid siphons (arrowhead), and electrocardiogram showing an old inferior myocardial infarction

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patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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#### **Conflicts of interest**

There are no conflicts of interest.

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