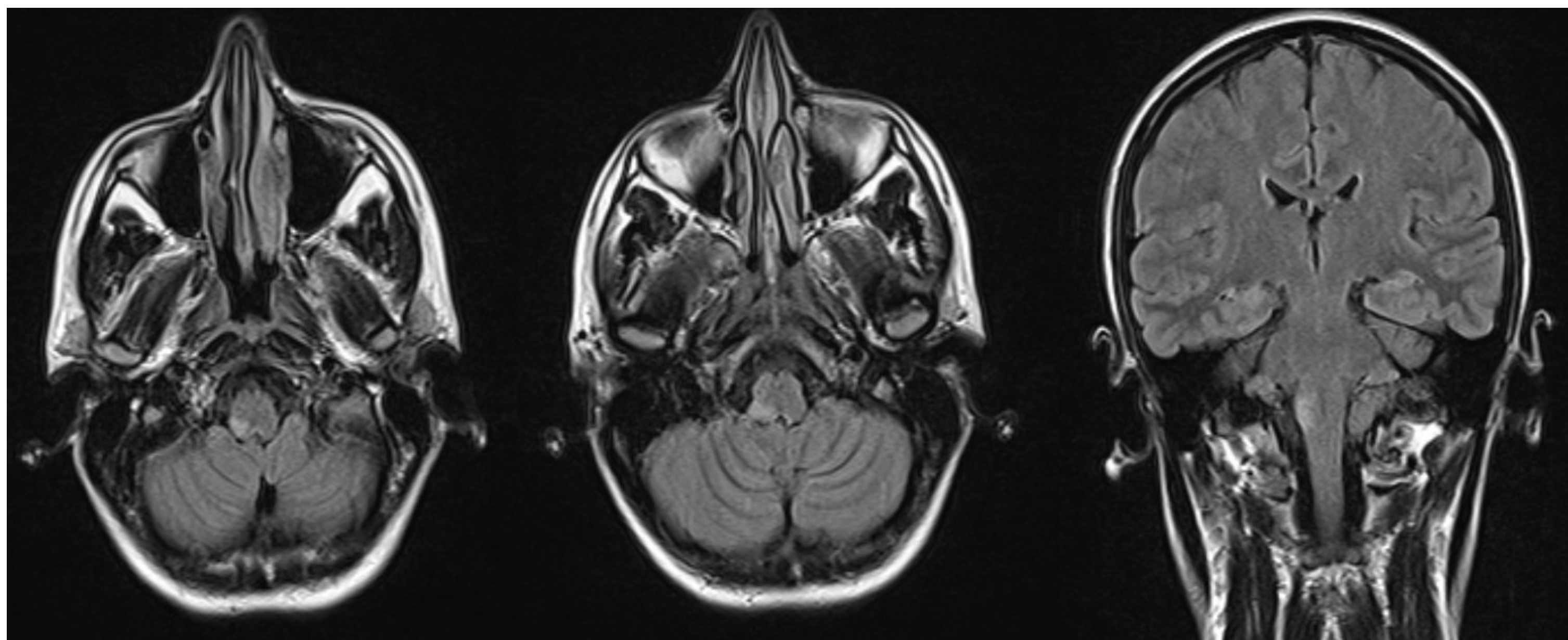


Sympathomimetic drugs and intracranial anatomic variant in a case of apparently cryptogenic stroke

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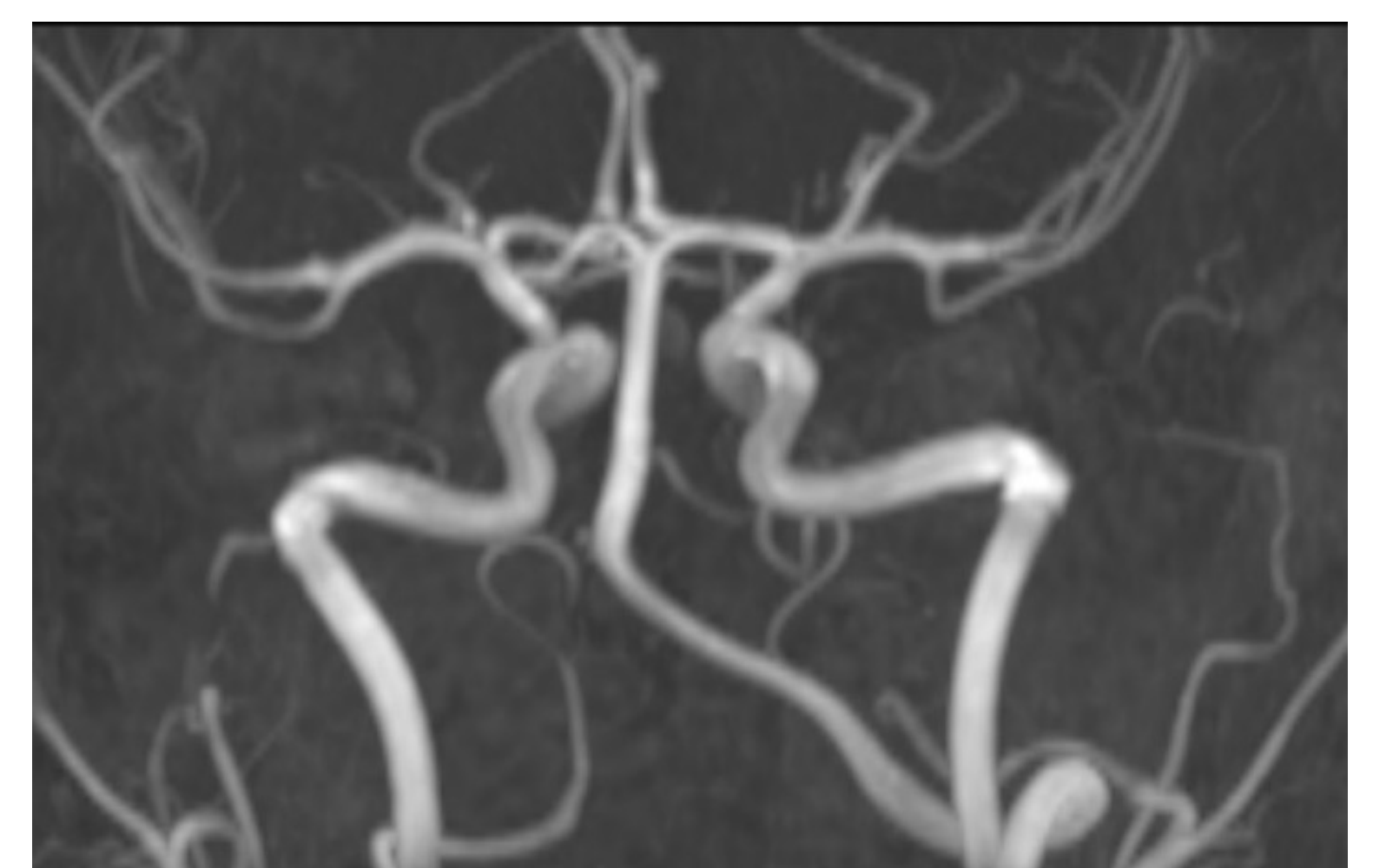
We report the case of a **28 years old woman**, light **smoker**, with a history of **migraine** without aura, suffering from **chronic sinusitis** with subcontinuous use of nasal decongestants (nafazoline), who suddenly experienced the acute onset of right **perioral paresthesias** and an **harmonic vestibular syndrome**.



Brain magnetic resonance imaging (**MRI**) showed a posterolateral medulla hyperintensity on FLAIR and DWI sequences; MR angiography (**MRA**) demonstrated hypoplastic right vertebral artery and PICA.

No pathological findings were revealed at **Doppler** examination and **echo-contrast Doppler** didn't show signs of arteriovenous shunt. No **metabolic diseases or coagulation disorders** were detected at blood test; **cerebrospinal fluid examination** was negative for inflammatory signs.

During hospitalization, personal anamnestic history was examined in depth: beside the use of subcontinuous sympathomimetic decongestant drugs, she reported **cocaine intake** in the hours preceding symptoms onset. Symptoms improved in the following days and brain MRI (performed 7 days after) didn't show lesion extension. **Nafazoline** and cocaine intake was suspended and no more symptoms developed during following months; she was treated only with clopidogrel as secondary prevention of ischemic events.



Here, we describe the case of a young woman with right **vertebral artery hypoplasia**, showing symptoms of **ischemic injury in a small posterior medulla region**, after simultaneous intake of sympathomimetic drugs and cocaine. The lesion is probably due to a "**hemodynamic mechanism**" that couldn't be hypothesized without MRA. A **complete interview** about patient's lifestyle and drugs intake is mandatory in case of ischemic lesions atypical for age or location.

1. Cocaine use and risk of stroke: a systematic review. Sordo L, Indave BI, Barrio G, Degenhardt L, de la Fuente L, Bravo MJ. Drug Alcohol Depend. 2014 Sep 1;142:1-13. doi: 10.1016/j.drugalcdep.2014.06.041. Epub 2014 Jul 11. Review. PMID: 25066468
2. Cocaine dependence and stroke: risks and managements Siniscalchi A, Bonci A, Mercuri NB, De Siena A, De Sarro G, Malferrari G, Diana M, Gallelli L. Curr Neurovasc Res. 2015;12(2):163-72. PMID: 25742568