

Myocardial Infarction and Secondary Hypertension in a Young Patient Using Oxandrolone

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Background

Observational studies link anabolic steroid use to adverse cardiovascular outcomes, including accelerated atherosclerosis, thrombogenesis, left ventricular hypertrophy, and hypertension—particularly at supraphysiological doses. We report a case of a young male who developed acute myocardial infarction (AMI) and secondary hypertension after oxandrolone use.

Case Report

A 35-year-old male with no prior comorbidities began self-administering oxandrolone six days before the event. After aerobic exercise, he experienced precordial pain radiating to the back, accompanied by nausea and malaise, prompting emergency care. The ECG revealed ST-segment elevation in inferior leads and second-degree atrioventricular block (AVB). AMI protocol (aspirin, ticagrelor, morphine) was initiated, and the patient was transferred to the catheterization lab.

Management and Intervention

Cardiac catheterization (radial access) showed occlusion of the mid-segment of the right coronary artery (RCA). Primary angioplasty with a drug-eluting stent (3.5 × 20 mm) was successfully performed. The left anterior descending artery (LAD) had a significant mid-segment lesion (80%), and the circumflex (CX) had a mild lesion. Tirofiban infusion was started for 24 hours, with staged PCI planned. Post-procedure echocardiography revealed mild systolic dysfunction (LVEF 48%, Simpson's method).

Two days later, the LAD was stented (2.75 × 18 mm).

Discussion

The patient recovered uneventfully on dual antiplatelet therapy. Outpatient evaluation revealed refractory hypertensive peaks despite bisoprolol and ramipril (initiated post-AMI). Secondary hypertension workup (polysomnography and lab tests) was negative. By the second month, echocardiography showed improved LV function (LVEF 60%), and the patient was classified as Killip I. Hypertension was attributed to prior anabolic steroid use.

Conclusion

This case highlights the association between anabolic steroids (oxandrolone) and severe cardiovascular events in young adults, even after short-term use. The lack of clinical justification for aesthetic use and the cardiometabolic risks underscore the need for public health awareness.

Potential conflicts of interest

Not have any potential conflict of interest to report.

Images

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