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Case Report

Myocardial Infarctus and Fresh Bleeding in Myocardial Crosssection Following Sildenafil Use, A Case Report

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Abstract

Sildenafil is widely used in the treatment of erectile dysfunction. Hemorrhages seen histologically in the atheroma plaque are caused by increased blood pressure due to exercise or emotional effects. We present a patient who was suddenly deceased after taking sildenafil, and coronary artery problems and acute hemorrhage in myocardium were detected in his autopsy.

KeyWords: Sildenafil, Myocardial Infarction, Acute Haemorrhage

Introduction

Sildenafil is a selective PDE 5 inhibitor used in the treatment of erectile dysfunction [1]. The association of cardiovascular disease, atherosclerosis, hypertension and diabetes mellitus is common in patients with erectile dysfunction. Smoking is known to be the most important risk factor for both cardiovascular diseases and erectile dysfunction [2].

It is aimed to contribute to the literature through this study with the case of a patient who did not have any known cardiac diseases other than angina pectoris, was reported to be deceased during sexual intercourse and fresh bleeding in the myocardium and sildenafil in the blood and urine examinations were detected as the result of his autopsy.

Case Report

Following the death of a 53-year-old male patient which was found to be suspicious, it was decided to perform an autopsy. The patient's medical history included hypertension and diabetes mellitus, he experienced an occasional chest pain, but did not apply to a hospital. It was reported that the patient died suddenly while having sexual intercourse with his partner at the entrance of the house. Internal examination revealed widespread calcified atheroma plaques in the aorta and calcified atheroma plaques that severely narrowed the lumen in all three coronary arteries. In the thinning of myocardial cross-sections; left ventricular lateral wall and septal wall cross-sections showed significant scar areas and fresh bleeding area within the scar on the septal wall. Both lungs were found to be congested and severely edematous. Post-mortem toxicological analysis revealed Sildenafil in blood, and Sildenafil and Metformin in urine.

Discussion and Conclusion

It has been reported that physical exercise and sexual activity play a role in acute coronary events in predisposed patients [3]. The sexual performance of the patient has been reported to be very high by his partner, whose examinations showed calcified atheroma plaques on the coronary artery walls and scars on myocardial cross-sections. We think that the effect of Sildenafil cannot be overlooked in the high sexual performance of the patient who suffered from an occasional chest pain and associated cardiac problems, and who had risk factors for erectile dysfunction such as age, hypertension, diabetes melllitus and smoking history.

Although the source of hemorrhages is somewhat controversial, the best explanation is the rupture of small blood vessels around the plaque. Hemorrhages appear histologically in the atheroma plaque, whether acute or chronic. This type of bleeding occurs due to an increase in blood pressure due to exercise or an emotional effect [4]. Sildenafil, used in the treatment of erectile dysfunction, causes vasodilatation and increased smooth muscle relaxation with a nitric oxide / cyclic guanosine monophosphate (NO / cGMP) dependent effect, thus prolonging erection [1]. Sildenafil, which has been reported to have vasorelaxant effects on aorta in in-vitro studies, reduces aortic stiffness in people [5]. We have concluded that sildenafil, which causes emotional stimulation in addition to its vasorelaxant effect, may have contributed to myocardial fresh

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bleeding in the patient who reported many episodes of angina pectoris in his past. There are case reports of myocardial infarction after sildenafil use in the literature [2,6,7]. However, in the case of our patient who used sildenafil and showed high sexual performance, the presence of fresh hemorrhage within the scar areas on myocardial cross-section was evaluated as a contribution to the literature. Myocardial infarction and fresh bleeding in myocardium cannot be directly attributed to sildenafil. However, due to its contribution to sexual performance and vasorelaxant effect, Sildenafil is thought to have led to these results indirectly in the patient who suffered from cardiac problems.

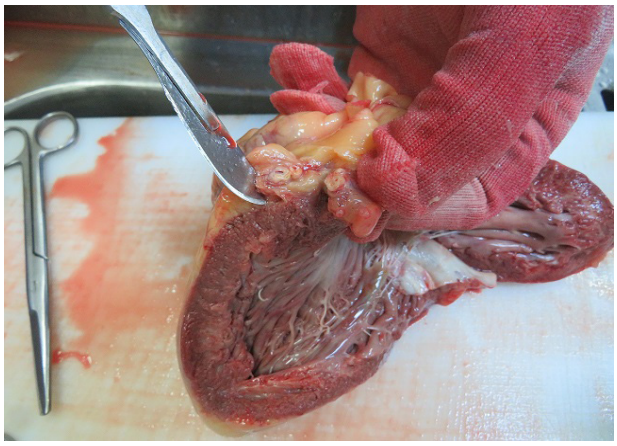

Figure 1: Scarring and fresh haemorrhage in myocardial cross-section

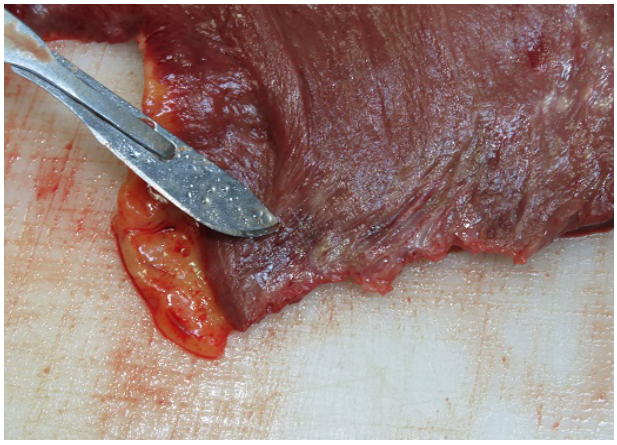

Figure 1: Calcified atheroma plates severely narrowing the lumen in the coronary artery

References

1. Sharab , F. M., et al. “Effect of s ldenaf l on the solated rat aort c r ngs.” Fundamental & cl n cal pharmacology 19.4 (2005): 449-456.
2. Kek ll Murat, et al. “Acute myocard al nfarct on after s ldenaf l c trate ngest on.”Annals of Pharmacotherapy 39.7-8 (2005): 1362-1364.
3. Arruda-Olson AM, Mahoney DW, Nehra A, Leckel M, Pell kka PA. Card ovascular effects of s ldenaf l dur ng exerc se n men w th known or probable coronary artery d sease: a random zed crossover tr al. JAMA 2002;287:719-25.
4. Kn ght’s. Forens c Pathology. Fourth Ed t on. CRC Press, 2016;518.
5. T ryak oglu, Selma Kenar, et al. “Aort c d ssect on due to s ldenaf l abuse.” Interact ve card ovascular and thorac c surgery9.1 (2009): 141-143.
6. Tatlı Ersan, et al. “Does s ldenaf l contr bute to acute coronary thrombos s?.” Turk Kard yol Dern Ars 40.6 (2012): 536-9.
7. Ek nozu İsma l, et al. “The relat onsh p between acute coronary syndrome and s ldenaf l.” The Amer can journal of emergency med c ne 31.9 (2013): 1424-e1.