



Functional medicine

Recurrent transient global amnesia after intracavernous Caverject injection in erectile dysfunction after robotic prostatectomy

D. Maffei ^a, F. Grizzi ^a, M. Zanoni ^b, P. Vota ^b, M. Justich ^b, G. Taverna ^{a,b,*},¹^a Humanitas University, Pieve Emanuele, MI, Italy^b Humanitas Mater Domini, Castellanza, VA, Italy

ARTICLE INFO

Keywords:

Transient global amnesia
Caverject injection
Erectile dysfunction
Robotic prostatectomy

ABSTRACT

Treatment of erectile dysfunction after radical prostatectomy includes intracavernous Caverject injections. We present the case of recurrent transient global amnesia in a man performing self-administration of Caverject after robotic radical prostatectomy. The correlation between the intracavernous injection and the neurological phenomenon was repeated and evident, yet the specific aetiology of transient global amnesia remains uncertain.

Introduction

Erectile dysfunction (ED) is a well-known complication following robotic radical prostatectomy (RARP)¹ and intracavernous injections of Caverject remains one of the pharmacologic standard treatments.²

Transient global amnesia (TGA) is a rare and frightening condition whose underlying pathophysiological basis has not been understood, yet it most commonly remains an isolated event. Some authors have postulated it may be related to cerebral vein thrombosis and epileptic events. Several inciting factors have been reported, such as pain, anxiety, exercise, which have been hypothesized to be connected by a Val-salva maneuver.³

We would like to report on a case of recurrent transient global amnesia as an adverse drug reaction in a patient performing Caverject injections after RARP.

Case presentation

A 66-year-old male, EM, underwent RARP at our institution in 2016 for treatment of localized prostate cancer. Since surgery, no evidence of recurrence has been observed. His medical history includes right bundle branch block and his medications are limited to aspirin for primary prevention. No drug allergies reported.

Treatment of ED following RARP in this patient consisted in oral PDE5 inhibitors and, upon therapeutic failure, intracavernous injections

of Caverject, first at 10mg and then 20mg. The patient would perform 2–4 injections per month, generally obtaining sufficient erection for successful penetrative intercourse.

In March 2019, the patient experienced an episode of transient global transient amnesia which occurred during a sexual intercourse with his wife aided by an intracavernous injection with Caverjet 20mg. As the partner recalls, the patient performed the injection mid-afternoon with satisfactory results in terms of erection, being able to complete a satisfactory intercourse. About 2 hours after the drug administration, the patient became confused, paranoid and was not able to recall recent events or his whereabouts, while continuously repeating the same questions to his partner. The patient remained alert and had insight of the episode, while not being able to calm down nor reply to his wife's questions about events happened in the last few weeks to months.

After a period of 4 hours from the injection, the patient started recovering, and he regained full memory of previous recent events within 24h. The patient was however unable to remember anything occurring during the first 4 hours following the Caverject injection.

EM was subjected to a cardiological and neurological check up, including 24h Holter Blood-pressure monitoring, Electroencephalography, Brain MRI and coronarography, which excluded organic causes of the event.

After a period of abstinence from sexual activity and Caverject use, the patient started performing Caverject injections in August 2019. On 23rd Jan 2020, after about having performed 20 Caverject self-

Abbreviations: TGA, Transient Global Ischemia; ED, Erectile dysfunction.

* Corresponding author. Humanitas University, Pieve Emanuele, MI, Italy.

E-mail address: gianluigi.taverna@humanitas.it (G. Taverna).

¹ Present address: Istituto Clinico Humanitas, via Manzoni 56, Rozzano (MI), Italy.

<https://doi.org/10.1016/j.eucr.2020.101184>

Received 19 March 2020; Accepted 26 March 2020

Available online 2 April 2020

2214-4420/© 2020 Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

administrations, EM experienced a second analogous episode of TGA. The patient has not performed any more administration.

Discussion

TGA represents an important and worrisome clinical phenomenon, that may result in socially dangerous events. The case we have hereby reported highlights a repeated correlation between the administration of Caverject, the singular therapeutic efficacy of such administrations and the appearance of TGA, managed thanks to the presence of the patient's partner. As far as we are concerned, we cannot establish whether the cause lies in the drug administered or the sexual vigor allowed by the particularly efficacious response to therapy at the time. During other Caverject self-administrations, the patient's erectile response had resulted similarly valid without the appearance of the neurologic phenomenon. In any case, being unable to foresee precisely the response to treatment, which varies from administration to administration, we have endorsed the patient's decision to interrupt the pharmacoprotection.

Conclusions

In conclusion, recurrent episodes of TGA have been observed after

intracavernous Caverject injections. It is yet to be understood whether the inciting cause is secondary to the active principle (Alprostadil), any of the excipients or episodic sexual vigor.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial or not-for-profit sectors.

References

1. Shabataev V, Saadat SH, Eletman DS. Management of erectile dysfunction and LUTS/incontinence: the two most common, long-term side effects of prostate cancer treatment. *Can J Urol*. 2020 Feb;27(1S1):17–24.
2. Philippou YA, Jung JH, Steggall MJ, et al. Penile rehabilitation for postprostatectomy erectile dysfunction. *Cochrane Database Syst Rev*. 2018 Oct 23;10:CD012414. <https://doi.org/10.1002/14651858.CD012414.pub2>.
3. Tynas R, Panegyres PK. Factors determining recurrence in transient global ischemia. *BMC Neurol*. 2020 Mar 6;20(1):83. <https://doi.org/10.1186/s12883-020-01658-8>.