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Case Report

Ischemic priapism induced by a fixed drug combination of tamsulosin and tadalafil

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ABSTRACT

Priapism, a persistent erection lasting more than 4 hours, can be caused by various factors, including medications. This case report presents a 23-year-old male who developed ischemic priapism after taking tablet Contiflo-T, a combination of tamsulosin and tadalafil. The patient required multiple interventions, including aspiration and intracavernosal phenylephrine injections, to resolve the condition. The combination of these drugs, which are commonly used for urinary tract symptoms and erectile dysfunction, likely contributed to the priapism by increasing blood flow to the penis and preventing its return to a flaccid state. This case highlights the potential for adverse drug interactions and the importance of careful monitoring when prescribing medications for these conditions.

Keywords: Priapism, Tamsulosin, Tadalafil

INTRODUCTION

A persistent penile erection that fails to subside even after an orgasm is known as priapism. An erection is considered priapic if it lasts longer than 4±6 hours. Excessive release of contractile neurotransmitters, occlusion of draining venules, intrinsic detumescence system malfunction, or prolonged intracavernosal smooth muscle relaxation can all result in priapism, a failure of the detumescence mechanism. The two main categories of priapism are low flow and high flow (non-ischemic). Males with sickle cell disease may also experience high flow priapism, however trauma is usually the cause. Reduced venous outflow and vascular stasis are the consequences of low flow priapism, the most common type, which causes tissue hypoxia and acidosis.

Tissue ischemia-induced pain has been linked with low flow priapism but not high flow priapism.[1] Herein, we present a case of ischemic priapism caused by ingesting a combination of tamsulosin and tadalafil.

CASE REPORT

Percutaneous nephrolithotomy with Double-J stenting had been performed on a male patient, age 23, at a different hospital. For stent-related dysuria, the patient received tablet Contiflo-T (tamsulosin 0.4 mg + tadalafil 5 mg), which he took twice a day to achieve better relief. As a consequence, he developed priapism and sought treatment for it. The patient complained of painful micturition along with swelling and soreness over the penis for three days. Following a clinical examination and arterial blood gas investigation, ischemic priapism was determined to be the cause of his symptoms (pCO_2: 62.3 mmHg, pO_2: 36.8 mmHg, and pH: 7.313).

Serum electrolytes, prothrombin time-international normalized ratio (PT-INR), renal function tests, and a complete blood count were all within normal ranges. A penile doppler ultrasound revealed bilateral corpora cavernosa engorgement, which indicated venous priapism. Three aspirations were performed, but the condition did

not improve. Additionally, several attempts of corporal wash with saline were unsuccessful. The priapism was reversed following five attempts at intracavernosal injections of 200 micrograms/ml of phenylephrine spaced 10 minutes apart.

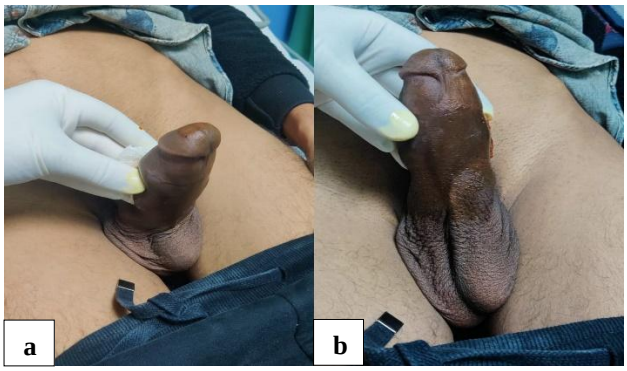

Figure 1 (a and b): Ischemic priapism in a 23-year-old male patient after taking tablet Contiflo-T.

DISCUSSION

This case report focuses on ischemic priapism induced by the consumption of tablet Contiflo-T, a combination of tamsulosin and tadalafil. The patient required multiple interventions, including aspirations and intracavernosal phenylephrine injections, to manage the condition. This case underscores the need for careful prescription and monitoring when using such drug combinations, particularly in young patients.

Priapism is a rare and pathological condition where an erection persists beyond or is unrelated to sexual stimulation.[2] Ischemic priapism, the most common form, constitutes over 95% of all priapism cases. It is characterized by time-dependent changes in the corporal metabolic environment, including hypoxia, hypercapnia, and acidosis. These changes result from compromised circulation within the corpora cavernosa, leading to a compartment syndrome that necessitates emergency intervention to prevent permanent damage, such as corporal fibrosis and erectile dysfunction.[3]

Tablet Contiflo-T contains two active ingredients—tadalafil and tamsulosin. Tadalafil, a phosphodiesterase-5 (PDE5) inhibitor, enhances penile blood flow by relaxing vascular smooth muscles. Tamsulosin, an alpha-blocker, relaxes the smooth muscles of the prostate and bladder neck to facilitate urination. While both drugs serve distinct purposes, their combined pharmacological effects can exacerbate the risk of priapism. Tadalafil's ability to increase blood supply to the penis and tamsulosin's inhibition of detumescence mechanisms likely contributed to the priapism in this case.

Worldwide pharmacovigilance data highlight the rare but significant risk of priapism with PDE5 inhibitors. For instance, the World Health Organization's VigiBase database reports 258 priapism cases among 31,827 adverse events associated with PDE5 inhibitors between 1983 and 2021.[4] A similar review by Rezaee et al identified 411 FDA-reported priapism cases linked to PDE5 inhibitors since their introduction in 1998.[5] Although priapism represents a minority of drug-related adverse effects, its occurrence necessitates prompt medical intervention to avoid irreversible outcomes.

In this report, the interplay between tadalafil's vasodilatory effects and tamsulosin's alpha-blocking action likely precipitated the condition. Despite its rarity, this adverse interaction underscores the importance of considering individual patient factors and potential drug interactions when prescribing such medications. This case represents a critical addition to the limited literature on drug-induced priapism, particularly with fixed-dose combinations like Contiflo-T.

Healthcare providers should educate patients on recognizing the early signs of priapism and emphasize seeking immediate medical care if symptoms occur. Proactive measures, such as thorough patient history and risk assessment, can mitigate the likelihood of such adverse events.

CONCLUSION

This case highlights the potential risks associated with the combination of tamsulosin and tadalafil, particularly in young patients. While these medications are effective for managing urinary tract symptoms and erectile dysfunction, they can lead to severe adverse events like priapism when used improperly. Comprehensive patient education, vigilant monitoring, and personalized prescribing practices are crucial to minimizing such risks. This report underscores the importance of further research and awareness to improve the safety and efficacy of fixed-dose drug combinations in clinical practice.

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REFERENCES

1. Melman A, Serels S. Priapism. Int J Impot Res. 2000;12(S4):S133-9.
2. Montague DK, Jarow J, Broderick GA, Dmochowski RR, Heaton JPW, Lue TF, et al. American urological association guideline on the management of priapism. J Urol. 2003;170(4 Part 1):1318-24.
3. El-Bahnasawy MS, Dawood A, Farouk A. Low-flow priapism: risk factors for erectile dysfunction. BJU Int. 2002;89(3):285-90.
4. Lui JL, Shaw NM, Abbasi B, Hakam N, Breyer BN. Adverse reactions of PDE5 inhibitors: An analysis of the World Health Organization pharmacovigilance database. Andrology. 2023;11(7):1408-17.

5. Rezaee ME, Gross MS. Are we overstating the risk of priapism with oral phosphodiesterase type 5 inhibitors? J Sexual Med. 2020;17(8):1579-82.

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