



Caso clínico

Sildenafil in severe peripheral ischemia induced by terlipressin. A case report

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ABSTRACT

A female patient in the sixth decade of life developed renal failure secondary to gastrointestinal bleeding, which was non-responsive to conventional therapy. She was treated with terlipressin iv; showing improvement but developing, over the next few days, ischemia and necrosis of the toes in the lower extremities, simulating necrotizing vasculitis, without response to regular management. An alternative therapy, oral sildenafil 50 mg BID, was used, with a rapid reversal of the clinical picture. The vasodilator action of sildenafil is useful in cases of ischemia induced by some drugs. The objective this report is to warn about the utility of sildenafil in some potentially severe cases, like the one above.

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Sildenafil en isquemia periférica severa inducida por tarlipresina. Reporte de un caso

RESUMEN

Una paciente de la sexta década de la vida desarrolló fallo renal secundario a hemorragia digestiva incoercible, con datos de choque hipovolémico, por lo que fue tratada con tarlipresina iv, con lo que hubo mejoría, pero presentó isquemia y necrosis de los dedos en extremidades inferiores, simulando vasculitis necrotizante sin respuesta al manejo terapéutico habitual, por lo que se empleó como alternativa sildenafil oral 50 mg 2 veces al día, con reversión rápida de su cuadro clínico. La acción vasodilatadora del sildenafil demostró ser una opción útil en el presente caso y el objetivo de esta comunicación es alertar de la respuesta satisfactoria al sildenafil en casos de isquemia inducida por medicamentos, semejantes a lo que se presenta en la práctica médica.

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Palabras clave:

Tarlipresina
Isquemia reversible
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Case report

A 51 year-old woman came to the emergency room with a history of alcoholic cirrhosis, portal hypertension, and esophageal varices (previously treated with sclerotherapy) and chronic renal failure, with her last creatinine clearance measured at 40 ml/h. She was classified as Child-Pugh C. She had presented upper digestive tract bleeding for 12 h. After 24 h with persistent hemorrhage, intravenous terlipressin was added to the management (4 mg/24 h); on the third day after treatment, she developed cyanosis of the toes, and the terlipressin was discontinued immediately. These changes

progressed to ischemia and extended throughout the feet, accompanied by poor peripheral pulses and tissue damage as shown in figure 1-A. Because of her blood loss, acute renal failure developed, with an elevation of serum creatinine from 1.9 mg/dl on the first day to 8 mg/dl, and she developed grade IV hepatic encephalopathy; serum bilirubin was normal and an arterial and venous Doppler ultrasound was performed showing no signs of obstruction and normal flows. Because of the lack of response to management we started treatment with oral sildenafil 50 mg twice per day. At the third day she showed great improvement and sildenafil 75 mg/24 h was continued for two more weeks. She preserved her toes. At this point, she had grade I encephalopathy, and also had improvement of renal function with a reduction in serum creatinine to 3.2 mg/dl.

Finally, at day 30, the patient was completely recovered, with normal serum creatinine, a normal neurological state and healthy skin (fig. 1-C).

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Fig. 1. Sequential pictures of the patient's evolution. Despite treatment with dermic nitroglycerin and other vasodilator drugs, necrotic areas, ischemic and other lesions are showed (picture A and B). At day 25 sildenafil starts to show a good response which is observed in picture C.

Discussion

Sen et al described a possible toxic effect of terlipressin related to its vasoconstrictor action.¹ Terlipressin has been associated with peripheral ischaemia² and vasculitis-like lesions, like the ones observed in this case. Sildenafil is a selective inhibitor of GMP-phosphodiesterase with an effect on microvascular and macrovascular circulation, approved for use in erectile dysfunction, pulmonary arterial hypertension, and recently described by Fries et al for use in Raynaud's phenomenon in cases not showing a response to common vasodilator therapy.³ Kumana et al has informed of sildenafil use in the presence of ischemia and tissue necrosis, with improvement of three severe cases.⁴ The effect obtained from the use of sildenafil, due to vasodilatation, could be considered as an effective therapy in cases of ischemia secondary to terlipressin, like the case above, when some other vasodilators agents cannot be indicated due to deleterious effects like hypotension. Another beneficial effect of sildenafil could be an increase of renal arterial flow with improvement of renal function in acute renal failure; the latter should be investigated to a larger extent. Sildenafil opens the possibility of use in ischemia of another etiology, and should be the object of more study as an alternative drug

or even as the first option, alone or associated to other vasodilators, in severe cases of ischemia.⁵⁻⁸

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