

Systemic Vascular Resistance Guided Vasopressor Dose Titration in a Case of Vasodilator Shock Caused by Metformin

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Vasodilator shock and metformin-associated lactic acidosis (MALA) are the worst adverse effects of metformin toxicity. Systemic vascular resistance (SVR) is known to be decreased in vasodilator shock. Accordingly, vasopressors are the treatment of choice of vasodilator shock; their effect is via increasing the SVR. Cardiac output can be measured accurately and non-invasively using transthoracic echocardiography (TTE).

A fifty-seven-year-old male patient was admitted with vasodilator shock induced by metformin toxicity. TTE was used to provide serial measurements of the SVR. Accordingly, vasopressor doses were titrated. The patient received vasopressor therapy, standard supportive medical treatment, in addition to continuous renal replacement therapy. On the sixth ICU day, epinephrine was weaned off, followed by nor-epinephrine on the tenth day. The patient was transferred to the ward by the fifteenth day.