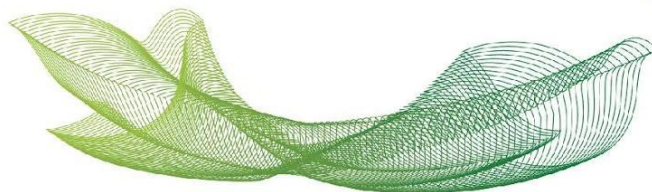


Tipo	Periódico
Título	Resveratrol-nitric oxide donor hybrid effect on priapism in sickle cell and nitric oxide-deficient mouse
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Resumo	<p>Background: Children and adult with sickle cell disease (SCD) display priapism associated with low nitric oxide (NO) bioavailability and oxidative stress in penis.</p> <p>Aim: This study aimed to evaluate the effects of hybrid compound RVT-FxMe, derived from resveratrol bearing a NO-donor subunit, on two murine model that display priapism phenotype, SCD transgenic mice and endothelial NO synthase gene-deficient (eNOS-/-) mice.</p> <p>Methods: Wild-type, SCD, and eNOS-/- mice were treated with RVT-FxMe (25 mg/kg/d, 2 weeks).</p> <p>Outcomes: Hematological parameters, concentration-response curves to acetylcholine (ACh) and sodium nitroprusside (SNP), as well as to electrical field stimulation (EFS), were obtained in mice corpus cavernosum strips.</p> <p>Results: Corpus cavernosum relaxations to SNP and EFS were increased in eNOS-/- group, which were normalized by RVT-FxMe treatment. SCD mice exhibited an excessive CC relaxant response induced by ACh, EFS and SNP RVT-FxMe treatment did not change the increased relaxant responses to ACh, EFS and SNP in corpus cavernosum from SCD group.</p>



	<p>Clinical translation: Excess of plasma hemoglobin in SCD may interfere in pharmacological activity of NO donors compounds.</p> <p>Strength/limitations: While mechanistic data with promising potential is showed, the current study is not without limitations. RVT-FxMe effects in the mid- and long-term warrant complementary studies.</p> <p>Conclusion: Treatment with RVT-FxMe reversed the enhanced NO-cGMP-mediated CC relaxations in eNOS-/- mice, but not in SCD mice; it is likely that excess of plasma hemoglobin in SCD mice act to inactivate NO before it reaches soluble guanylyl cyclase, avoiding restoration of NO bioavailability in penis.</p>
Fomento	Fapesp