Drug for erectile dysfunction improves heart function in young heart-disease patients

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Heart function significantly improved in children and young adults with single-ventricle congenital heart disease who have had the Fontan operation following treatment with sildenafil, a drug used to treat erectile dysfunction and pulmonary hypertension, say researchers from The Children's Hospital of Philadelphia.

Single-ventricle defects are a collection of cardiac malformations that impair the heart's ability to pump blood. Examples include tricuspid atresia, pulmonary atresia/intact ventricular septum and hypoplastic left heart syndrome.

The Fontan operation is a procedure that redirects systemic venous blood directly to the pulmonary arteries, bypassing the heart. It is the third surgery in a staged palliation for single-ventricle heart defects.

Researchers hypothesized that sildenafil may help cardiac performance by directly improving the squeeze of the heart muscle and by allowing for better filling of the heart.

In this study, researchers randomized 28 children and young adults who had undergone the Fontan operation to receive placebo or sildenafil three times a day for 6 weeks. After a 6-week break, subjects were switched to the opposite treatment course. The researchers found significant improvement in heart performance during treatment with sildenafil.

"The enhanced heart performance may improve exercise performance and quality of life in these children and young adults," said David J. Goldberg, M.D., pediatric cardiologist at The Children's Hospital of Philadelphia, who presented the abstract on Nov. 17 at the American Heart Association Scientific Sessions in Orlando, Fla.

Source: Children's Hospital of Philadelphia (news : web)