Levosimendan in Patients With Left Ventricular Systolic Dysfunction Undergoing Cardiac Surgery With Cardiopulmonary Bypass: Primary Results of the LEVO-CTS Trial

Purpose: To evaluate the safety and effectiveness of levosimendan, a calcium-sensitizing inotrope, in reducing adverse cardiac events in patients with left ventricular systolic dysfunction undergoing cardiac surgery, (66% with cardiopulmonary bypass).

Trial Design: Levosimendan vs placebo adverse event rate; phase 3; randomized, double blinded; 70 sites. 30-day f/u. N=882

Primary Endpoint: 1. Composite of death or dialysis @ 30 days, and MI or mechanical assist device use over 5 days. 2. 30-day death or mechanical assist device use over 5 days

Trial Results	levosimendan	placebo	P value
Endpoint 1	24.5%	24.5%	0.9775
Endpoint 2	13.1%	11.4%	0.4501

Conclusions: Primary endpoint outcomes were similar for levosimendan vs. placebo in patients with left ventricular systolic dysfunction having cardiac surgery.

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