Temocapril is a thiazepine prodrug that inhibits angiotensin-converting enzyme (ACE). Temocapril exhibits antihypertensive, anti-diabetic, anti-hyperglycemic, and anti-atherosclerotic activities. Temocapril decreases blood pressure without affecting heart rate or cardiac output and improves endothelial dysfunction, vascular remodeling, insulin resistance, and renal function. In animal models, temocapril inhibits elevations in the fasting plasma glucose level and loss of pancreatic β-cells, preventing the development of hyperglycemia. In stroke-prone hypertensive rats, temocapril prolongs survival rates. In other animal models, this compound inhibits oxidative stress and atherosclerotic remodeling. Temocapril also inhibits matrix metalloproteinase 2 (MMP2), decreasing peritoneal solute transport in animal models during peritoneal dialysis, indicating potential benefit in prevention of peritoneal injury.

References