Materials and Methods

Participants

Twenty-five hypertensive individuals aged 40-65 years were recruited from the Cardiology Clinic at [Hospital Name]. Inclusion criteria included a diagnosis of hypertension and stable medication regimen for the past three months.

Study Design

This was a randomized, double-blind, placebo-controlled trial conducted over a 12-week period. Participants were randomly assigned to either the treatment group receiving the experimental drug (n=13) or the control group receiving a placebo (n=12).

Intervention

Experimental Drug

Participants in the treatment group received a daily oral dose of the experimental drug (10mg) for 12 weeks.

Placebo

Control group participants received an identical-looking placebo following the same dosage schedule.

Measurements

Blood Pressure

Systolic and diastolic blood pressure were measured using a validated automated blood pressure monitor (Omron BP742N) at baseline, weekly during the intervention, and at the end of the 12-week period.

Adverse Events

Participants were monitored for adverse events through regular clinical assessments, self-reporting, and open-ended interviews.

Data Analysis

Statistical analysis was performed using SPSS version 26. Changes in blood pressure within and between groups were assessed using repeated-measures analysis of variance (ANOVA). Significance was set at $p < 0.05$.

Ethics

This study was approved by the Institutional Review Board (IRB) of [Hospital Name]. Informed consent was obtained from all participants, and the study was conducted in accordance with the principles of the Declaration of Helsinki.