NEJM: The polypill reduces cardiovascular mortality by 33% in patients treated after myocardial infarction

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The results of the SECURE trial, coordinated by CNIC were presented in a Hot Line session at the European Society of Cardiology meeting (ESC 2022) in Barcelona and published at the NEJM

The polypill developed by the Centro Nacional de Investigaciones Cardiovasculares (CNIC) and Ferrer , which includes three drugs (aspirin, an angiotensin-converting enzyme (ACE) inhibitor, and a statin), is effective at preventing secondary adverse cardiovascular events in people who have previously had a heart attack. The polypill reduces mortality from cardiovascular causes in this population by 33%.

This is the finding of the SECURE study, coordinated by CNIC. The study results were presented today in a Hot Line session at the European Society of Cardiology meeting (ESC 2022) in Barcelona and are published in *The New England Journal of Medicine* (NEJM).

Dr. Valentín Fuster, principal investigator of the SECURE study, CNIC General Director, Director of Mount Sinai Heart and Physician-in-Chief of The Mount Sinai Hospital, said "**the results of the SECURE study show for the first time that the polypill, which contains aspirin, Ramipril, and atorvastatin, achieves clinically relevant reductions in the recurrent cardiovascular events among people who have recovered from a previous heart attack**."

SECURE included 2499 patients from 7 European countries (Spain, Italy, Germany, the Czech Republic, France, Poland, and Hungary) recovering after a myocardial infarction. The study participants were randomly assigned to receive standard therapy or the CNIC polypill. The average age of the participants was 76 years, and 31% were women. The study population included 77.9% with hypertension, 57.4% with diabetes, and 51.3% with a history of tobacco smoking.

The SECURE trial analyzed the incidence of four major cardiovascular events: death from cardiovascular causes, non-fatal myocardial infarction, non-fatal stroke, and emergency coronary revascularization (the restoration of blood flow through a blocked coronary artery). The study followed patients for an average of 3 years and produced conclusive results: patients taking the polypill had a 24% lower risk of these four events than patients taking the three drugs separately.

The standout finding of the study is the effect of the polypill on the key outcome of cardiovascular related death, which showed a relative reduction of 33%, from 71 patients in the group receiving standard treatment to just 48 in the polypill group.

The study also found that patients in the polypill group had a higher level of treatment adherence than those in the control group, thus confirming the findings of the earlier FOCUS[2] study, also funded by the European Union.

"Adherence to treatment after an acute myocardial infarction is essential for effective secondary prevention. The polypill, being a very simple strategy that combines three essential treatments for this type of patient, has proved its worth because the improved adherence means that these patients are receiving better treatment and therefore have a lower risk of recurrent cardiovascular events. said Dr. José María Castellano, study first author and Scientific Director of Fundación de Investigación HM Hospitales.

According to Oscar Pérez, Chief Marketing, Market Access and Business Development Officer at Ferrer, "the 33% reduction in cardiovascular mortality demonstrates the efficacy of treatment with Trinomia[3] compared to standard treatment. These results ratify our purpose of making a positive impact in society and represent an important step in our mission to provide significant and differential value to people who suffer from serious health conditions".

Concluding, Dr. Fuster said "the SECURE study findings suggest that the polypill could become an integral element of strategies to prevent recurrent cardiovascular events in patients who have had a heart attack. By simplifying treatment and improving adherence, this approach has the potential to reduce the risk of recurrent cardiovascular disease and death on a global scale."

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Bibliography

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3. Ficha ténica Trinomia®: FICHA TECNICA TRINOMIA 100 MG/40 MG/10 MG CAPSULAS DURAS (aemps.es)

* Trinomia®, Sincronium®, Iltria®. Contiene Ácido acetilsalicílico 100mg, Atorvastatina 20/40mg y Ramipril 2,5/5/10mg.

Polypill Strategy in Secondary Cardiovascular Prevention. NEJM 2022: Jose M. Castellano, Stuart J. Pocock, Valenti Fuster... et all for SECURE investigators. 10.1056/NEJMoa2208275

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