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Polypill for Primary Prevention: Has The Time Arrived?

Authors' Reply

Since the introduction of the concept of Polypill for cardiovascular disease (CVD) prevention, many studies have been conducted to determine whether it can be recommended as routine primary prevention of CVD. In the previous issue of the *Arch Iran Med* (2012; **15(9):** 531 – 537) we reported the estimated effectiveness of such a combination using updated meta-analyses of the component drugs.[1] Our estimates of the relative reduction in CVD mortality are more conservative than those previously reported,[2–5] because we estimated the effects of Polypill components on clinical endpoints rather than modeling their effects through reductions in blood pressure and serum cholesterol and we used a more conservative assumption for the combined effects of multiple treatments. None-the-less we may still have overestimated the achievable effects particularly, because adherence to treatment in the general practice settings is expected to be less than that reported in randomized trials.

Particular aspects of the cardiovascular disease epidemiology and health system characteristics in Iran may support large scale population-based administration of Polypill: CVD constitute 53% of deaths above age 30 in Iran[6]; 54% of these deaths are attributable to high blood pressure and 22% to high serum cholesterol.[7] The pills are produced locally at a low cost and an extensive primary health care network can enhance the feasibility and coverage of the policy.

However, we agree with Nirantharakumar and Marshal that before the use of Polypill can be recommended as a strategy for primary prevention of CVD on a national scale, its safety and acceptability should be evaluated in large scale randomized trials and its cost-effectiveness should be rigorously examined. It should also be noted that the coverage of the primary health care system in urban areas may need to be strengthened (possibly using family physicians) before such a national strategy can be successfully implemented. We also reiterate our emphasis that medical interventions should be combined and balanced with effective lifestyle interventions in a comprehensive national CVD prevention strategy.

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