Council's Corner: Hypertension Issues - a personal View

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Hypertension in India – a growing challenge that requires a comprehensive response

Currently non-communicable diseases (NCDs) such as cardiovascular diseases (CVD), diabetes, chronic lung diseases and cancers are the principal cause of morbidity, mortality and disability in India. As a result on ongoing health transitions, India faces the dual burden of diseases – a scenario in which infectious diseases, maternal and child health issues remain a considerable challenge along with the rising burden of NCDs.

According to the Global Burden of Disease estimates, the fourth foremost preventable NCD risk factor in India today is hypertension or high blood pressure.1 Projections indicate that the number of hypertensives in India will nearly double from 118 million in 2000 to 213 million by 2025. Hypertension is estimated to be responsible for nearly 10% of all deaths. Hypertension prevalence in adults has risen dramatically across India over the past three decades from about 5% in certain rural and urban communities to between 20%-40% in urban areas and 12%-17% in rural areas. Many more have pre-hypertension, which underlines the fact that a comprehensive response is required. Between 1942 and 1997, the mean systolic blood pressure (SBP) had also increased from 120 mmHg to 130 mmHg, particularly among 40 to 49 year old urban men. National trend data are unavailable, but many sub-national studies have reported increases in hypertension across the country over the past two decades in consonance with the rapid health transitions that are occurring, resulting in altering the way individuals live, work, eat and move. 2

Notably, unlike in developed countries, most of the CVD and hypertension related deaths occur at younger ages with consequent adverse health, economic and societal implications. In 2004 the annual income loss from NCDs among working adults in India was US$ 50 billion and that due to hypertension alone amounted to US$. 860 million.3 Hypertension was also a leading cause for hospitalizations and outpatient visits. The Indian Council of Medical Research (ICMR) estimates that 16% of ischemic heart disease, 21% of peripheral vascular disease, 24% of acute myocardial infarctions and 29% of strokes in India could be attributable to high blood pressure underlining the huge impact effective hypertension prevention and control can have on reducing the rising burden of CVD and NCD.2

Although the burden of hypertension is high, it is inadequately detected and managed. Reports from various parts of India indicate that only about 30% of people with hypertension are detected, less than half of those diagnosed receive anti-hypertensives and only half of them have their blood pressure treated and controlled to recommended targets leading to a huge burden of premature avoidable morbidity, disability and mortality. 2 Though national data on treatment and control are unavailable, sample studies conducted across various regions of India such as North (Delhi 10.5%), South (Chennai 7.5%, Trivandrum 8.6%), East (Assam 18.1%), and West (Mumbai 13.6%) indicate sub-optimal control blood pressure control.4 Inadequate access to health services and simple evidence-based medications, delays in diagnosis, limited opportunistic or targeted screening programmes, poor adherence to prescribed pharmacological and non-pharmacological therapies, and complexities associated with taking multiple medications are some of the reasons for inadequate control and failure to attain treatment targets. Of note, the capacity of the health system to identify those with hypertension, provide appropriate evidence-based interventions and ensure compliance to these interventions is severely limited by a lack of physicians and the high costs of medical treatment.

Considering this increasing disease burden as well as the social, developmental and economic threat posed by NCDs and hypertension, the Government of India has initiated the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS). Its components include: (i) establishment/strengthening of health infrastructure; (ii) early diagnosis and treatment; (iii) human resource development; (iv) health promotion; and (v) monitoring, surveillance and research. The NPCDCS is expected to be integrated into the health system. It has hypertension as a key focus area, as it is easily diagnosable and treatable with lifestyle modification measures and effective medicines, besides providing an entry point to deal with other NCDs as any intervention will help concomitantly
address complications/comorbidities. The programme also entails opportunistic screening for hypertension at the sub-centre level and NCD clinics, as well as training for medical officers and health workers.

Effectively addressing hypertension in India requires not only strengthening the health system and improving healthcare delivery but also implementation of population based risk reduction strategies. Policies aimed at modest reductions in salt intake/fat intake/sugar intake, increase in physical activity/fruit-vegetable intake and avoiding tobacco use) could prevent a large proportion of disease events in the whole population and complement improvements in healthcare delivery. For example, a 2% population-wide decrease of diastolic blood pressure, such as that easily achievable by modest salt reduction, was estimated to avert 300000 coronary heart disease and stroke deaths in India, with further decreases in blood pressure yielding higher. Recent mathematical modelling by Basu et al also suggests that modest salt reduction could substantially reduce cardiovascular disease throughout India. Future myocardial infarctions and strokes in India were predicted with a Markov model simulating men and women aged 40 to 69 years in both urban and rural locations, incorporating the risk reduction from lower salt intake. If salt intake does not change, the authors expect approximately 8.3 million myocardial infarctions (MIs), 830,000 strokes and 2.0 million associated deaths per year among Indian adults aged 40 to 69 years over the next three decades. Reducing intake by 3 g/day over 30 years (~0.1 g/year, 25% reduction) would reduce annual MIs by 350,000, strokes by 48,000 and deaths by 81,000 among this group without producing iodine deficiency.

Given the high population salt with the average intake being 9–12 g/day, salt reduction is potentially one of the most cost-effective strategies to prevent hypertension in India and has the additional potential to improve hypertension control rates, reduce the need for anti-hypertensive medications and consequently curb associated health care costs as observed in other countries.

The escalating burden as well as the low levels of awareness, treatment and control rates of hypertension in comparison to rest of the world warrants priority public health action for prevention and control that incorporates both the high risk and population approaches. This is essential to achieve the United Nations-WHO goal of 25% reduction in premature NCD mortality and associated reductions in hypertension.

REFERENCES:

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