Commentary

Preventing hypertension - An exercise in social engineering

A large number of population surveys from different parts of the globe have consistently demonstrated hypertension to be a ubiquitous disease\(^1\)\(^-\)\(^5\) encompassing all ethnic groups and geographic regions. The disease affects both sexes and more and more patients are turning up at younger ages. Hypertension is the leading member of the group of so called “non-communicable diseases” (NCD) and a leading contributory cause of death worldwide\(^6\). Future growth in numbers is projected to outstrip population growth by a factor of 2\(^7\)! It is believed that hypertension contributes about 57 per cent towards all deaths from strokes and 24 per cent towards all deaths from coronary artery disease\(^5\). The contribution towards morbidity from these crippling diseases, as also chronic renal failure, would be staggering indeed.

The study by Dong and colleagues from China\(^8\) in this issue supplements the earlier study of Gu and colleagues that reported on a nationwide survey of hypertension in China\(^9\). Both publications reinforce the message that the disease is a serious health issue of global interest. Therefore, the need for sharpening focus on this disease that is contributing so much to human suffering, cannot be overemphasised. Since hypertension progresses so insidiously it seldom produces any symptoms unless a complication strikes either in the brain, heart or kidneys. Consequently the disease remains undetected for long. Further, even when detected, compliance with treatment is a major problem such that consequential damage continues to take a heavy toll.

Most published reports are based on the assumption that the upper limit of blood pressure in the normal population is 140 / 90 mm of Hg or thereabouts. Recent evidence suggests that the category of “high normal blood pressure”, also called “prehypertension”, may well not be without clinical consequences\(^10\)\(^,\)\(^11\) thereby indicating that the adverse impact on health from hypertension may be even greater than hitherto estimated. Consequently, the bar for adequate control of blood pressure in the community would have to be lowered yet again!

In the absence of a precise fix on aetiology of the disease, (essential) hypertension, in common with other NCDs, has also earned the sobriquet of “lifestyle disease”. Traditional wisdom, therefore, suggests that hypertension, should be less common amongst late comers into “modernity”, and by the same logic amongst rural population groups as compared to corresponding urban groups. Whereas formal research is supportive of that concept, the gradient in some areas is not comforting\(^5\), perhaps because rural populations are also catching up on “modernity”!

A recent report by the WHO\(^12\) draws attention to the forbidding economic cost of NCD in terms of both production losses from disruptions in the work place as well as the escalating cost of treatment which in the very large majority has to be life long. The economic loss to India from the group of non communicable diseases is expected to increase from $ 8.7 billion in 2005 to $ 54.0 billion in 2015! The corresponding figure for China is about $ 558.0 billion\(^12\).

Considering that modern medicine, in spite of the tremendous infusions of technology, is unable to offer a cure for hypertension, as with other members of NCD, the only viable option to pursue is prevention of the disease as far as possible. Whereas eradication of the disease altogether may well not be possible, a substantial reduction in the burden of the disease is certainly achievable\(^13\). In the absence of an identified precise cause(s) for the disease the target area for prevention must perforce shift to a much broader canvass of factors that have been identified as contributing to the escalation in the prevalence of this disease, rather most of the NCDs, the so called “risk factors”.

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The title “lifestyle diseases” emphasise a common stratum of causality that promotes each one of these, otherwise pathologically and therapeutically distinct, disease entities. That common stratum, is the aspirational mind set that is driving current social order, causing, perhaps unwittingly, a conflict between biology and human aspirations. Much as we might be encouraged to believe that the human body can be abused at will, reality is different. Sooner we realise the boundaries of what human anatomy and physiology can endure the better for all of human kind. Creation, however it may have happened, has given us a body that is a complex array of several million chemical factories, individual body cells, that constantly interact with one another in one way or another. It would be a fair assumption that the human body was not structured for the way humankind has been living in modern times. Instead, it was structured for life in the wild competing for space with all other fellow living creations of nature, plants and animals. All the trappings of life as we know today, came much later. For example, the human body was never created for sitting in chairs or being driven around in cars or even for eating cooked food! That the human machine has been able to adapt in some measure, to the multitude of demands placed on it and not collapsed altogether under the weight of this wholesale change, is itself a tribute to the measure of flexibility and redundancy in the human body. It should come as no surprise therefore that such a wonderful machine, a unique embodiment of nanotechnology, should begin to creak under the burden of escalating human demands. Early burnouts in persons engaging in extreme sports, even professional events, are a case in point. The spurt in NCDs worldwide is more or less an inevitable consequence of the abuse that the human body suffers from the pulls of societal aspirations.

Therefore, a serious effort that could have a chance of making a dent in this growing “epidemic” of NCDs and consequential economic costs would require a remodeling of social aspirations such that these do not put an undue strain on human biology. Such an exercise in “social engineering” can begin only when the basic issue is recognised. At the moment there does not seem any effort at living within sustainable biological boundaries. Often mere mention of social engineering raises heckles as it is thought to conflict with individual freedoms and aspirations. On the contrary, social engineering need not advocate puritan lifestyles nor deny all creature comforts; what is sought is to bring social structure into harmony with human biology and no more. This is not an effort to turn the clock back to a “primitive lifestyle” but forwards to a “sustainable lifestyle” in keeping with the biological boundaries of the human body, much like the movement for “sustainable environment”. Undoubtedly that is an uphill task, on a steep gradient, but achievable nevertheless given the will and commitment to promote human happiness which is what all of medical science strives for in the first place.

Fortunately, the prospect of crippling economic cost of escalating infusions of technologies, often unnecessary, has begun to inform the decision making process amongst the powers that be. It is being increasingly realised that promoting good health as a matter of state policy is a better option; a beginning has been made in Europe\textsuperscript{14}. It should not be very difficult for us in this country to vigorously pursue this course considering that the concept has been very much a part of our ancient national ethos. For that reason we ought to be able to carry this strategy forward with much greater vigour as compared to western societies. Even though a tall order, it is not beyond the ingenuity of humankind with a rich history of achieving the seemingly impossible. To ensure success a different philosophy of life that advocates a positive attitude in search of good health needs to be promoted forcefully, albeit with imaginative patience. Such an effort at behaviour modification and aspirational remodeling will require commitment from thinkers from all walks of life besides health care professionals, such as sociologists, psychologists, economists, policy makers, opinion makers, businesses bonded together by an apolitical social vision. Any takers that can place this satellite in orbit would be making a welcome contribution to society and to human happiness! A daunting task indeed but, does humankind have a choice? Frankly, No! Perhaps the movements for “sustainable healthcare”, “sustainable lifestyle” and “sustainable environment” could coalesce in time to drive a common movement for “sustainable social order”!

Of course, the concept of prevention of disease is not new; on the contrary ancient wisdom, especially in our country, has always promoted the thought. It is just that business interests and the glamour of various interventions with modern tools has distorted our order of priorities both at the level of policy formulations and delivery of healthcare services. Current efforts at
prevention introduce interventions that are far too weak and amorphous to succeed.

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References