

Hypertension : Guidelines and Bangladesh Perspective

Abdullah Al Shafi Majumder, MD, FACC, FRCPE, FRCP(G), FESC, FSCAI, FCSI

(Cardiovasc. j. 2015; 8(1): 1-2)

With the successful curb on the infectious diseases like small pox, poliomyelitis, measles, diarrheal diseases, tuberculosis, we are increasingly feeling the burden of non-communicable diseases (NCD's) in our country. Among the NCDs, hypertension singly stands out as the most important disease that demands our due attention. In Bangladesh, there was a survey of non-communicable risk factors in 2010 done on a nationally representative sample of about 10,000 persons that reported that 17.9% adults aged 25 years or more have hypertension. (WHO, non-communicable disease risk factor survey, Bangladesh, Dhaka, 2011.) The authors in a review article on "Hypertension in Bangladesh: a review" stated that in Bangladesh approximately 11-18% of adults and 40-65% of elderly people suffer from hypertension. (Islam & Majumder; Indian Heart Journal 6403 (2012) 319-323.) Similar findings are started in a article published 2 years back (Moniruzzaman et al "Prevalence of hypertension among Bangladeshi adult population, a metaanalysis. (Regional Health Forum 2013;17:15-19). Recently Rahman et al published an article showing that prevalence of prehypertension and hypertension in Bangladesh were 21.1% and 24.4% respectively. They further noted that among the patients with hypertension, 50.1% were aware of their condition; 41.2% were in treatment but only 31.4% had controlled hypertension. ("Prevalence and control of hypertension in Bangladesh: a multilevel analysis of a nation-wide population-based survey". Journal of Hypertension 2015;33:465-472)

We are aware of a number of guidelines on hypertension published by different bodies. British Heart Society (BHS) and National Health Institute for Clinical Excellence (NICE) published their guideline in 2011 which has been updated in 2013.

European Society of Hypertension and European Society of Cardiology have the "Guideline for the management of arterial hypertension" in 2013. American College of Cardiology (ACC) and American Heart Association (AHA) jointly issued a guideline in 2013. Much awaited Joint National Committee (JNC) VIII report has been published in 2014 – "Evidence –based guideline for the management of high blood pressure in adults"

All these guidelines have some points to differ. BHS/NICE guideline classify hypertension as Stage I hypertension (>140/90mmHg) ; Stage II hypertension (>160/100mmHg) and severe hypertension (>180/110mmHg). ESH/ESC guideline make an elaborate classification of blood pressure (instead of simply hypertension): Optimal (<120/80mmHg); Normal (120-129/80-84 mmHg); High normal (130-139/85-89mmHg); Grade 1 hypertension (140-159 &/or 90-99mmHg); Grade 2 (160-179 &/or 100-109mmHg); Grade 3 (>180&/or >110mmHg) and Isolated systolic hypertension (SBP >140 and DBP<90). ACC/AHA simply categorize hypertension as Stage 1 hypertension (140-159 &/or 90-99mmHg) and Stage 2 hypertension (>160 &/or >100 mmHg). JNC VIII report does not classify the stages/grades of blood pressure. Rather it sets threshold for initiating anti-hypertensive treatment.

The guidelines mention the preferred initiating drugs in their recommendation. ACC/AHA and ESH/ESC guidelines recommend 5 class of drugs – ACEIs, ARBs, CCBs, BBs and diuretics as the pharmacotherapy. But BHS/NICE and JNC VIII reserved the beta-blockers in selected patients (e.g. in resistant hypertension).

All the mentioned guidelines are based on the data that donot include our population or the population

of similar ethnicity. Nonetheless we traditionally follow any one or combination of these guidelines. Reminding a simple fact, suggestions provided by the guidelines are based on scientific evidences derived from the population excluding our population. Thus there is paradox!

There is “Indian Guidelines on Hypertension III-2013” (JAPI. 2013,61(2), Due to similar ethnicity and socio-economic conditions of Bangladesh and India, we have interest to go through this guideline. It makes a classification of blood pressure in 18 years and above as : Optimal (<120/<80mmHg); Normal (<130/<85mmHg); High Normal (130-139 &/or 85-89 mmHg); Hypertension stage 1 (140-159 &/or 90-99 mmHg); Hypertension stage 2 (160-179 &/or 100-109 mmHg); Hypertension stage 3 (>180 &/or >110 mmHg). Isolated systolic hypertension is defined as Grade 1 (SBP 140-159 with DBP <90mmHg) and Grade 2 (SBP >160 and DBP <90 mmHg). They suggest 5 class of anti-hypertensive drugs : ACEI, ARB, CCB, Diuretics and newer beta-blockers

With this background, in December, 2013, “ National Guideline for management of hypertension in Bangladesh” has been published by the World Health Organisation (WHO). The guideline was developed by an expert committee chaired by National Professor (Brig) Abdul Malik. The importance of this guideline lies on the fact that for the first time clinicians of this country have their own problem oriented reference in their hands. Our guideline categorizes the blood

pressure as Optimal (<120/<80 mmHg); prehypertension (120-139 &/or 80-89 mmHg); stage 1 hypertension (140-159 &/or 90-99 mmHg); stage 2 hypertension (160-179 &/or 100-109 mmHg); stage 3 hypertension (>180 &/or >110 mmHg); isolated systolic hypertension (SBP > 140 with DBP <90). Experts of the guideline suggest 4 class of drugs (diuretics; ACEI; ARB and CCB) as the preferred drugs. They put a comment “ given the low cost and availability of beta-blockers, it may be considered in certain settings”.

In different aspects , Indian and Bangladesh guidelines have many points in common (though Bangladesh guidelines suggest mercury sphygmomanometer and Indian guidelines oppose the use of mercury and suggest aneroid machine.

What we need in the future is evidence based guideline rather than the guideline based mainly on expert opinion. We have to have broader population-based epidemiological studies to get data of prevalence of hypertension in different regions of the country with different food, particularly salt intake, habit as well as in different sub-sets of people of varied socio-economic condition and occupation. Effective doses of different anti-hypertensive drugs with possible variation of metabolism of drugs need to be explored more.

We may hope that in the next few years we may develop guidelines for our own population and physicians that will be based more on the evidence based data.