Hypertension

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Hypertension is public health problem and challenge in the world. World Health Organisation estimates that at present there are about 800 million people with high blood pressure in the world (1). Based on literature review, it has been predicted that prevalence of estimated 972 million hypertensive adults in 2000 will increase in 2025 by about 60% to a total of 1.56 billion (2).

Hypertension is a medical condition in which blood pressure is increased. It can be classified in two categories:

1. Primary: In this hypertension no medical cause can be found to explain the increase in blood pressure. It is common and about 90-95% of hypertension is primary or essential hypertension

2. Secondary: This means that there is hypertension due to another disease/condition like kidney disease, tumors etc.

Hypertension is very important in relation to health. There is need to have regular checkups for its diagnosis. As mild (light) to moderate primary (essential) hypertension is usually asymptomatic so great care is needed.

General symptoms are:

- Headache
- Drowsiness – a strong desire for sleep, or sleeping for unusually long periods
- Vision disturbance
- Confusion and inability to focus attention
- Nausea – Feelings or urge to vomit
- Vomiting
- Epistaxis—Bleeding from nose

RISKS of hypertension complications/effects

- Stroke
- Heart failure
- Heart attack
- Damage to retina (in eye)
- Chronic kidney disease/kidney failure
- Thickening of the muscles of left chamber of heart
- Possible DEATH

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How to decrease risk of hypertension and its complications?

It is possible, NOT difficult

- Reduce weight
- Regular light exercise (walk etc)
- Low sugar in food
- Decrease of sodium salt in diet
- Stop tobacco use
- Taking very less/no stress during job or work
- Decreasing environmental stress—high sound, moving in heavy traffic regularly, walk in polluted and noisy area etc
- Take healthy diet
- Checking off and on blood pressure
- If diagnosed hypertension, take regular advice and medicines

In South Asian countries increased hypertension prevalence and increasing trend has become a public health challenge. In India, Studies show hypertension prevalence 20% to 27.2% (3) (4) (5). In hypertension age and stress have their roles. In a study with age 60 years and above prevalence of hypertension found 63.8% (6) and a study in bank employees who have high levels of mental stress in their jobs the prevalence of hypertension found 69.5% (7).

In Bangladesh, studies showed the prevalence of systolic hypertension (SBP > or = 140 mmHg) 14.4% (8) and 10.5% (9) while diastolic hypertension (DBP > 90 mmHg) 9.1%. (8) and 9.0% (9).

In Pakistan, studies showed the prevalence of hypertension 10.4%, to 26% (10-15) (11) (12) (13) (14) (15). In low income areas and in office job persons, clerks, hypertension was found higher than others. In persons from different provinces prevalence of hypertension was different. The prevalence of hypertension was the highest among Balochis 25.3% in men and 41.4% in women, then Pashtuns 23.7% in men and 28.4% in women, Muhajars 24.1% in men and 24.6% in women, Sindhis 19.0% in men and 9.9% in women and Punjabis 17.3% men and 16.4% in women (16).

In China, a study showed that hypertension prevalence in adults increased from 14.4% to 18.8% during 1991 to 2002. The current estimated prevalence of hypertension among Chinese adults is 20% (17). The International Collaborative Study of Cardiovascular Disease in ASIA 2000-2001 in adults of age 35 to 74 years showed 27.2% hypertension prevalence (18). Studies showed the prevalence of hypertension 27.9% to 37.8% in China (19) (20) (21) (22).

In South Asian countries, China and the UK, the prevalence of high blood pressure based on WHO data shows highest prevalence of hypertension in India, both in male and female population (23) as in table 1 below.
Table 1: According to WHO, prevalence of Hypertension having ≥ SBP 140 and/or DBP 90 mmHg or on antihypertensive medication (23)

<table>
<thead>
<tr>
<th>Data Year</th>
<th>Age group</th>
<th>Prevalence %</th>
<th>Bangladesh</th>
<th>India</th>
<th>Pakistan</th>
<th>China Both Sexes</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>F</td>
<td>M</td>
<td>F</td>
<td>M</td>
</tr>
<tr>
<td>2003</td>
<td>20+</td>
<td>7.0</td>
<td>8.0</td>
<td>51.3</td>
<td>51.3</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>1995</td>
<td>25+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>18+</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>16+</td>
<td></td>
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</tbody>
</table>

In the USA, according to Centers for Disease Control and Prevention (CDC), crude hypertension rate during 2001-2004 in 20+ age general population was 30.8% in both sexes. (24). WHO data reveals raised blood pressure prevalence 20.1% in USA in 20+age, 6.7% in Norway in 16+ age, 3.3% in Sweden in 16-84 years and 32.2% in UK in both sexes and in rural and urban population(25).

In the UK hypertension is public health problem also. In a study, The Health Improvement Network (THIN) from 1998 to 2006 and data from the Health Survey for England (HSE) in 1998 and 2003 was compared. The prevalence of hypertension was 25.3% in 1998, 27.8% in 2003 and 26.9% in 2006 in The Health Improvement Network (THIN). In Health Survey for England (HSE) it was 37.3% in 1998 and 32.9% in 2003 (26).

Health Survey for England 2006 shows prevalence of hypertension 33.5% in men and 28.8% in women among 16+ age (27), as shown in table 2 below.

Table 2: 16+ age Prevalence of hypertension (above 140/90mmHg)(27)

<table>
<thead>
<tr>
<th>Sex</th>
<th>16+ age Prevalence % (2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hypertensive controlled</td>
</tr>
<tr>
<td>Male</td>
<td>6.4</td>
</tr>
<tr>
<td>Female</td>
<td>7.6</td>
</tr>
</tbody>
</table>

Hypertensive controlled: SBP below 140mmHg and DBP below 90mmHg, currently taking medication for blood pressure
Hypertensive uncontrolled: SBP at or greater than 140mmHg and DBP at or greater than 90mmHg, currently taking medication for blood pressure
Health survey for England 2004 shows that mean systolic blood pressure (SBP) is higher among men than women in the general population and in each minority ethnic group. Mean SBP increases with age in both sexes, in the general population and in all minority ethnic groups (48) as shown in the table below.

Table 3: South Asians, Chinese and general population in the UK and blood pressure (48)

<table>
<thead>
<tr>
<th>Hypertension</th>
<th>16+age</th>
<th>Prevalence %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bangladeshi</td>
<td>Indian</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td>Systolic Blood Pressure mean</td>
<td>121.0</td>
<td>127.3</td>
</tr>
<tr>
<td>Diastolic Blood Pressure mean</td>
<td>72.2</td>
<td>75.2</td>
</tr>
<tr>
<td>Hypertensive controlled</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Hypertensive uncontrolled</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>All with HTN</td>
<td>16</td>
<td>33</td>
</tr>
</tbody>
</table>

Hypertensive controlled: SBP <140mmHg and DBP <90mmHg and taking medicine prescribed for high blood pressure
Hypertensive uncontrolled: SBP >=140mmHg or DBP >=90mmHg and taking medicine prescribed for high blood pressure

**Ethnic minorities in the UK and in western countries need to be more careful regarding hypertension.**

**Advice:**

- Check blood pressure off and on with recommended machine by your GP. An error may mislead you with unreliable machine
- Keep an eye of any symptom related to hypertension
- **REMEMBER**, modifiable/controllable risk factors can save from hypertension and its complications/effects
References


