

Hypertension among School Children by Chronotherapeutic Systems

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COMMENTARY

The blood is carried from heart to all parts of the body and the pressure exerted by the blood upon the walls of the blood vessels is known to be as Blood Pressure (BP). The strength of the blood pushing against the artery vessels can be measured in units of millimeters of mercury (mmHg). The blood pressure is considered when there is high or low than 120/80 mmHg, where the first of the two is a measure of systolic pressure and the other is diastolic pressure. There are two types in blood pressure; one is Hypotension (Low Blood Pressure) and the other is Hypertension (High Blood Pressure). Hypertension (HT), generally known as high blood pressure or raised blood pressure, is a condition in which there is a persistent raised pressure in the blood vessels i.e., a high pressure against the walls of veins and arteries caused by blood flow, often occurs when veins or arteries are blocked or narrowed, further making heart harder to pump the blood and it is most common in the age group above 30 with work pressure or mental stress etc. HT is classified into Primary Hypertension and Secondary Hypertension where 90%-95% of cases are Primary HT, defined as high blood pressure recorded due to non-specific life style (like excess salt in diet, excess body weight, smoking, alcohol use etc.) and genetic factors, the remaining 5%-10% cases are categorized as secondary HT, defined as high blood pressure due to an identifiable cause, such as chronic kidney disease, narrowing of kidney arteries, endocrine disorder or use of birth control pills. Generally, the blood pressure is expressed in two measurements, systolic and the diastolic pressures i.e., maximum and minimum pressures respectively. For adults the systolic range is in between 100 mmHg-130 mmHg and 60 mmHg-80 mmHg is the diastolic range, whereas the high blood pressure range if it is resting persistently at or above 130/80 mmHg or 140/90 mmHg.

Table 1: % of HT in Paediatrics

Blood pressure type	In 03–11 years old
Normal BP (<120/<80 mmHg)	<90%
Elevated BP (120/80 to 130/90)	90%–< 95%
Stage1 HT (139/90 to 159/99)	95%–99%
Stage2 HT (160/100 to 179/109)	>95%

According to World Health Organisation (WHO), this is considered as a global public health problem as it causes mortality and morbidity. The major drawback for treating hypertension is, it does not show any sort of symptoms, suddenly leads to heart attacks and stroke also. As of now it is around 1 billion of population are with HT and its prevalence will continue to rise towards 1.5 billion by 2025. Nowadays, health care providers focus on the screening and treatment of hypertension in adults; however, they should also consider the importance of the BP tracking from early life and the increasing prevalence of pre-hypertension (pre-HT) and HT in the paediatric age group as a growing body of evidence indicates not only that HT gradually damages the function of vital organs, but also that pre-HT has the same harmful effects.

In this present generation, with increasing trends in developing countries, HT in school children i.e., Paediatric Hypertension, is reported worldwide, which is attributed due to sudden increase of Blood Pressure like dizziness, headache, nose-bleeding while playing games, failure to thrive, irritability, lack of energy, difficulty in breathing etc. Based on the locality, environment also there are chances of causing HT, at places like industrialized countries, mega cities there, children tend no interest to play games, rather they play video games which is having great impact on brain letting them to worry as well as hurry to win the game, building a bridge from brain to heart, a speed blood flow. By leading tension frequently and ignoring this condition will likely elevate the risk of HT. If the Paediatric HT is untreated, it will be associated with target organ damage and increased risk for adult HT. Unfortunately, in majority of cases, due to variety of factors, including complexity of factors including complexity of BP standards, Paediatric HT is undiagnosed as symptoms are not seen properly. But, a number of proven, highly effective, well tolerated lifestyle and drug treatment strategies can achieve by reduction in BP.

CONCLUSION

Therefore, these are the factors that cause HT in Paediatrics and there must be necessary changes to be taken in the lifestyle as well as the mental well-being in the children to prevent from this HT as there are many other complications interlinked with the HT.

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