

A Case Report on a Teenager with Uncontrolled Hypertension

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Abstract—Objective-- To describe a case report of teenager with uncontrolled hypertension.

Clinical presentation and intervention--A 15 year old girl admitted in Tertiary Care Hospital with fatigue and persistent headache. She reported the history of nasal bleeding, nausea, vomiting and raised blood pressure. Her hemoglobin was 11.2 g/dl, TSH level was 3.5 and level of sodium was 148. Provisional diagnose of uncontrolled hypertension was made and the patient was treated with anti-hypertensive drugs.

Conclusion--the physicians were clinically diagnosed the condition of patient as uncontrolled hypertension based on clinical presentation and family history of the client. Further investigations are required to find out the cause of disease.

Keywords--Hypertension, Thyroid Stimulating Hormone, Body Mass Index, Erythrocyte sedimentation rate, Electrocardiography.

1 Introduction

Higher blood pressure is known as hypertension. Hypertension is a condition in which the blood vessels have persistently raised pressure or when your blood pressure is equal or above than 140/90mmHg and also referred to as silent killer (Falkner, 2010). Hypertension is a significant public health problem, with increasing prevalence of 40.8% and control rate 32.3% worldwide. The prevalence of hypertension is more common in urban areas (16.55%) than rural areas (15.48%) (Shah et al., 2018). the prevalence ratio of hypertension is higher day by day. The prevalence of hypertension is much higher in > 32 years older than > 25 years (Johnson, Thorpe et al., 2014).

High blood pressure is a prime adverse factor of many cardiac diseases such as stroke, cardiac failure and failure among young generation. High blood pressure is a vital cause of mortality in young adults as compared by older adulthood. The overcome on hypertension is means that to decrease the morbidity and mortality ratio through education regarding hypertension and treatment (Kayima, Nankabirwa et al. 2015).

The hypertension is a turn into deliberate cosmic health problems and overwhelm. The prevalence of cardiovascular disease is due to high blood pressure and obesity in Asian population (Lee 2014). The causes of hypertension in young adults are also obesity. Obesity is major health issues in both developed countries. The incidence is higher in men than women (Aroor, DeMarc & Sowers, 2014). Countless factor are discovers risk factor for high blood pressure is socio biographic factor e.g. sex, age, parental history of high blood pressure, BMI, behavior factor, sleep duration, life style, smoking intake of alcohol and some diseases such as diabetes mellitus are very important risk factor of hypertension. The increase value of lipidemia and cholesterol level also increase chance of hypertension. The young adults are at risk because

sedentary life styles, no exercise, junks food, alcohol and smoking (Tadesse and Alemu 2014).

The family history is significant for hypertension. The hypertension is run through genetically in family's parents to children, in sibling. This study shows that the prevalence of hypertension is about 30% by family or hereditary (Ranasinghe, Cooray et al. 2015).

2 Case Report

A 15 year old girl admitted in Medical ward Madinah Teaching Hospital Faisalabad with the complaint of spontaneous nasal bleeding, persistent headache with nausea/vomiting, dizziness and uncontrolled hypertension from last 6 months. This was her 3rd admission at hospital due to uncontrolled hypertension despite taking Tab Amlodipine at regular basis. After taking brief history from patient she verbalize that she has no history of shortness of breath, prolonged cough, fever and skin rashes but she had the history of hypertension in her family. She verbalized about her diet that she was taking foods that was high in calories also taking sugary drinks and high sodium diet. On examination Radial pulse rate was 76 beats /minutes, both femoral pulses were feeble but other lower limb pulses were absent, B.P was 180/110mmHg and her weight was 58kg. After physical examination physician ordered these test to carry out immediately and results shown in table 1.

Table 1. Clinical laboratory investigation reports:

Parameters	Patient values	Normal values
Hematocrit%	42.2	41.0-53.0
Hemoglobin(g/dl)	11.2	12.5-16.5
White Cell count	20,500	4500-11,000
Neutrophils	87	40-70
Lymphocytes	8	22-44

Monocytes	3	4-11
Platelet count	278,000	150,000-400,000
Sodium (mEq/L)	148	135-145
Potassium (mEq/L)	2.6	3.4-4.8
Calcium (mg/dl)	8.7	8.5-10.5
ESR	30mm/h	<20mm/h
TSH	3.5	0.3-4.8

After checking the laboratory findings physician recommended ECG and chest X-ray and continuous monitoring of blood pressure of client and prescribed medications inj isokit infusion, inj hydralazine and tablet Zestril 100mg.

3 Discussion

The prevalence of hypertension was highest among Baluchistan (25.3%) in men and 41.4% in women), than Pashtuns (23.7% in men and 28.4% in women) and lowest among Punjab (17.3% in men and 16.4 in women) and Sindh (19.0% in men and 9.9% in women). While hypertension was more common in urban areas (22.7%) than rural areas (18.1%) (Jafar et al., 2003).

Family history plays an important role in developing hypertension. Some other factors also caused hypertension like obesity, sedentary lifestyle, smoking, alcohol junk food and metabolic syndrome. Hypertension is the root of many other diseases congestive heart failure or renal failure. Hypertension also effect on mental ability such as memory loss. The high blood pressure can cause myocardial infarction, coronary artery disease, stroke and heart failure. These complications may lead to death. The early diagnose by positive family history of hypertension is necessary to evaluate them for hypertension and avoid further complications (Ranasinghe, Cooray et al. 2015).

4 Conclusion

In this case, the physicians were clinically diagnosed the condition of patient as uncontrolled hypertension based on clinical presentation and family history of the client. Further investigations are required to find out the cause of disease. Dietary management like low sodium diet and potassium rich diet and physical activity is important to improve the condition.

5 References

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