

LOW BLOOD PRESSURE SYNDROME: A MYTH OR A REALITY?

Results of a patient's survey at a teaching hospital in Karachi

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ABSTRACT

Objective: To study patient's knowledge, perceptions attitude and practice with regard to low blood pressure.

Design: A Questionnaire-based survey.

Settings: Family Practice Center, Aga Khan University Hospital, Karachi, Pakistan, in June 2004.

Main outcome measures: Low blood pressure is a disease, causes and treatment of low blood pressure, patient ever suffered from low blood pressure, low blood pressure can be diagnosed with BP apparatus, without apparatus and stress can cause low blood pressure.

Results: A 110 patients were interviewed. Majority of the subjects were educated young married men, well placed socio-economically. A majority (73%) of the respondents consider low blood pressure as a disease entity. Weakness, dizziness, low mood and headaches are reported as symptoms and use of salt (41%) and medications (20%) are considered treatments for low blood pressure.

Conclusion: Further studies are recommended to ascertain the existence of low blood pressure syndrome in our population as a myth or a disease entity. Physician and patient education is also strongly recommended.

KEY WORDS: Blood Pressure, Hypotension, Dizziness, Belief, Myths, Patient education.

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INTRODUCTION

The American Heart Association supports the view that low blood pressure is better for the patient,¹ since cardiovascular and renal complications are more with increases in blood pressure.² Blood pressure is not so low under

normal circumstances, that it may cause symptoms such as lightheadedness or fainting,¹ and such symptoms clearly attributed to low blood pressure doesn't happen frequently. This belief stems from the seeing patients in clinical practice with blood pressures of 90/70mmHg and absolutely no symptoms of weakness, light headedness or fainting.

A number of medical conditions can cause low blood pressure such as dehydration, heart failure and the use of medications including antidepressants.³ Textbooks of medicine have chapters on high blood pressure and not on low blood pressure, since later is not considered a disease entity of much practical value in medical practice.

A large number of patients in our clinical practice believe they suffer from low blood pressure. It is a diagnostic label assigned mostly to patients with psychosomatic disorders, anxiety and depression. Such patients are treated in the community with intravenous

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infusions and vitamin injections for non-specific symptoms such as weakness, dizziness, aches and pains. The patients are made to believe they are suffering from low blood pressure and such therapy will alleviate their suffering. Such a practice appears to be common, and has resulted in "low Blood Pressure" being considered a disease entity, requiring treatment with intravenous infusions and vitamin injections or tablets.

Anxiety and depression often present with weakness, dizziness and aches and pains.^{4,5} Anxiety and depression are reported to have prevalence as high as 34% in Pakistan,⁶ and one wonders how many are being labeled as patients with low blood pressure and treated with excessive salt, intravenous infusions and vitamin pills or injections. The excessive use of salt may lead to high blood pressure in the long run with serious consequences for patients.⁷

Myths and fallacies with regard to health and disease are reported to be highly prevalent in Pakistani society,⁸ it is likely that a belief in the

existence of a low blood pressure syndrome is not based on scientific grounds and is a myth. The practice of labeling patients with vague symptoms as suffering from low blood pressure and then treating them with intravenous infusions, injections and vitamin pills may be driven by the desire of a few practitioners to make quick profits. It offers no benefit to the patient and may indeed be dangerous. Excessive parenteral use of medications such as vitamins are reported from Pakistan, resulting in an increase incidence of "Hepatitis B" and "Hepatitis C" due to unsafe needle practices.^{9,10}

Given this background, a need was identified to study knowledge, attitude, and practice of our patients with regard to low blood pressure.

PATIENTS AND METHODS

A questionnaire based cross sectional survey was conducted at the Family Practice Center of Aga Khan University Hospital, Karachi, Pakistan, in June 2004. On an average, twelve family doctors see 150 family practice patients daily at the center. Patients present with both primary and secondary care level problems.

A Questionnaire was developed by the principal investigator after extensive literature search including input from colleagues and patients. The questionnaire included data on demographic profile of the patient including age, sex, marital status, and education. Questions were directed at exploring patient's knowledge, attitude, and practice with regard to low blood pressure.

Questionnaire was made available in English and Urdu languages, and was administered depending on patient's comfort ability. The principal and the co-investigators interviewed the patients and filled out the questionnaire during the questioning. A pilot study was conducted before the start of the administration of the final questionnaire in order to correct any deficiencies. Prior to the initiation of the study, a meeting of investigators was arranged, to reach an agreement regarding the administration of the questionnaire to ensure uniformity.

Table-I: Demographic profile of the patients (n=110)

<i>Parameter</i>	<i>Number (Percent)</i>
<i>Sex:</i>	
Males	70 (64)
Females	40 (36)
<i>Mean Age in years</i> (Standard deviation)	38.06 (11.55)
<i>Marital Status:</i>	
Married	87 (79)
Single	23 (21)
<i>Educational Status:</i>	
Illiterate	05 (04)
Primary	10 (09)
Secondary	34 (31)
Intermediate	22 (20)
Graduate	27 (25)
Post-graduate	12 (11)
<i>Occupation:</i>	
Student	03 (03)
Unemployed	04 (04)
Government Service	11 (10)
Self Employed	25 (23)
Private Service	45 (40)
Housewife	22 (20)

The questionnaire was administered in the waiting area outside the physician's office, prior to the consultation. Patients interviewed were those who agreed to participate in the study. The interviews were conducted throughout the month and no specific timings were followed. Since a descriptive study was planned and data was to be reported as proportions, a sample size based on statistical calculations was not estimated.

Ethical requirement including the administration of written informed consent and the provision of confidentiality were ensured. Patients were interviewed based on their availability and convenience and a systematic random selection of study subjects was not under taken. SPSS computer software was used for data management.

RESULTS

A hundred and ten patients were interviewed.

Demography of the study population: Table-I. lists the demographic profile of the sample

population. Majority of the subjects were men (64%), married (79%), with a mean age of 38 years. Grade XII, graduate and post-graduate education was reported by 20%, 25% and 11% respondents respectively. Illiteracy, primary and secondary level education was reported by 04%, 09% and 31% respondents respectively. Majority of the respondents were in private service (40%), were self employed (23%) or housewives (20%). A minority was in government service (11%), un-employed (04%) or studying (03%)

Patient perceptions on Low Blood Pressure: Table-II and III lists patient perceptions on low blood pressure. An overwhelming majority (73%) considers low blood pressure as a disease entity. Weakness, dizziness, low mood and headaches are reported as symptoms of low blood pressure. Increased use of salt (41%) and medications (20%) are listed as treatments for low blood pressure. Twenty six percent respondents suffered from low blood pressure and 42% knew someone who suffered from it. Thirty nine percent believe blood pressure can

Table-II: Patient's perceptions on Low Blood Pressure (n=110)

<i>Patient responses</i>	<i>Number(Percent)</i>	<i>Patient responses</i>	<i>Number(Percent)</i>
<i>Agree Low Blood Pressure is a disease:</i>		<i>Both Low and high Blood pressure are medical problems:</i>	
Yes	80 (73)	Yes	37 (34)
No	16 (14)	No	62 (56)
Don't Know	14 (13)	Don't Know	11 (10)
<i>Low Blood Pressure causes:</i>		<i>Low Blood Pressure should be treated with:</i>	
* Weakness, dizziness	37 (33)	* Increased salt intake	46 (41)
* Dizziness	17 (15)	* Medications	22 (20)
* Weakness, Dizziness, unwell	14 (13)	* Increased fluid and salt intake	18 (16)
* Low mood, weakness, dizziness, unwell, depression, headache	12 (11)	* Coffee, tea, salt intake & rest	11 (10)
* Dizziness, headache	12 (11)	* Intravenous fluids & medications	05 (05)
* Weakness, dizziness and headache	09 (08)	* Salt intake & medications	05 (05)
* Dizziness, unwell	05 (05)	* Intravenous fluids	03 (03)
* Weakness, headache	04 (04)		

Table-III: Patient's perceptions on Low Blood Pressure (n=110)

<i>Patient responses</i>	<i>Number (Percent)</i>	<i>Patient responses</i>	<i>Number (Percent)</i>
<i>Patients with Low Blood Pressure can benefit with treatment from:</i>		<i>Low Blood Pressure can be treated with Home remedies</i>	
Allopathic practitioners	108 (98)	Yes	47 (43)
Homeopathic practitioners	01 (01)	No	63 (57)
Hakim Practitioners	01 (01)	Don't Know	—
<i>Home remedies to treat Low Blood Pressure:</i>		<i>Have you suffered from Low Blood Pressure?</i>	
Salt intake	26 (56)	Yes	28 (26)
Lemon juice	09 (19)	No	82 (74)
Fruit juices	08 (17)	<i>Know someone who has suffered from Low Blood Pressure:</i>	
Honey	02 (04)	Yes	46 (42)
Egg	01 (02)	No	64 (58)
Tea & Coffee	01 (02)		
<i>Low Blood Pressure can be diagnosed without BP Apparatus:</i>		<i>Stress is the cause for Low Blood Pressure:</i>	
Yes	43 (39)	Yes	68 (62)
No	56 (51)	No	22 (20)
Don't Know	11 (10)	Don't Know	20 (18)

be measured without the use of blood pressure apparatus and 62% consider stress as a cause for low blood pressure.

DISCUSSION

The demographic profile of the sample population is clearly different from the rest of the population. It comprised mostly of educated, married young men. It includes those in private or government service, with a substantial number self employed or housewives. Patients visiting a teaching hospital were interviewed and a non-random convenience sampling method was utilized. The sample size was limited to a hundred and ten patients. These factors in the study prevent generalization of the results. Despite these limitations, we have been able to highlight a very important clinical issue with serious implications for medical practice in the country.

A majority of patients (73%) perceive that low blood pressure is a disease, with a

substantial number (34%) who consider both high and low blood pressure as medical problems. This supports the existence of a low blood pressure syndrome as a disease entity in the society. Data is not available for comparison of these findings.

The respondents believe low blood pressure causes weakness, dizziness, low mood, and headache. This finding requires careful evaluation. These symptoms are very common and may be present in patients with somatization,^{11,12} anxiety,¹³ depression,¹⁴ anemia,¹⁵ heart disease¹⁶ and can be the side effects of several medications including antidepressants, antihistamines and tranquilizers. Labeling patients with these symptoms to be suffering from low blood pressure can have disastrous consequences for their medical care.

The treatment options listed by respondents for low blood pressure also require close scrutiny. The excessive use of salt can have deleterious consequences for the patient, particularly if he/she has underlying depres-

sion or somatization; symptoms will continue for extended period and long term therapy with salt can lead to adverse consequences for the patient.¹⁷

The use of medications for the treatment of low blood pressure can be dangerous and cannot be recommended. The use of intravenous infusions for treating low blood pressure should be discouraged at all costs unless a genuine indication for such therapy exists. Increased intake of coffee and tea can be considered as relatively less harmful means to treat the condition.

Contrary to our expectations, an overwhelming majority (98%) of patients believe that allopathic practitioners have treatment for low blood pressure. From our clinical practice, we are aware of complimentary medical practitioners offering treatment for this condition. This finding may also reflect that allopathic practitioners are responsible for promoting the belief among patients that their symptoms are due to low blood pressure. We have interviewed a highly selected group of patients and it is likely that patients in the community are more in favor of complimentary medical practitioners treating low blood pressure symptoms.

Home remedies have been listed as a common option to treat low blood pressure. Again the intake of salt as a home remedy causes one to worry how much of it is being used to treat the condition at home and over an extended period. The use of lemon and fruit juices and honey are a healthy option to treat the condition and can be encouraged, but use of eggs, tea and coffee as home remedy can be allowed within limits.

A high prevalence of low blood pressure has been reported by patients within our sample population. This sample consists of educated young men and it perhaps underestimates the magnitude of the problem that may exist in the community at large.

It is very disturbing to learn that a substantial number of patients believe low blood pressure can be diagnosed without using the blood pressure measuring apparatus. It is even

more distressing since we interviewed an educated group of patients and those in the community are more likely to have belief in this assumption. Labeling a patient to be suffering from low blood pressure without actually measuring the blood pressure can have very serious consequences since those actually having high blood pressure may end up getting excessive salt as treatment.

Stress is very common these days and is blamed for ill health.¹⁸⁻²⁰ It is for this reason perhaps that a majority of patients believe stress to be the cause for low blood pressure. Further studies to look at stress and blood pressure level may be required to prove or disprove the association. On the contrary, one may expect blood pressure to be on the higher side in those suffering from stress. The presence of this belief may offer an opportunity to promote healthy lifestyle among patients.

CONCLUSIONS

A belief exists in the community that low blood pressure is a disease entity which causes dizziness, weakness and headache requiring treatment with salt, fluids, tea, coffee and fruit juices. We strongly recommend further studies to clearly ascertain the existence of low blood pressure syndrome in our population as a myth or a disease. Patient and physician education is strongly recommended to avoid excessive use of salt, intravenous infusions and parenteral injections of vitamins to treat of low blood pressure.

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