CLINICAL ASSESSMENT OF "ARJIN" IN HYPERTENSION

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INTRODUCTION

It has been accepted that treatment of severe hypertension produces reduction in morbidity and mortality. In earlier years attention was largely focused on the hypertensive patients who had already suffered damage. There has been noticeable shift in emphasis towards offering treatment to milder cases. Attention is now being specially directed to milder cases with intention of beginning treatment before the patient has suffered from catastrophe or irreversible changes. However, treatment can be justified only if there is some evidence that treatment of symptomless patients does confer long term benefit. It is very clear from the assessment of risk of mild elevation of blood pressure. A man of 40 years with B. P. of 160/100 mm Hg has two and half times the chance of dying before he is 65 years than a man of the same age with B. P. of 120/80 mm. Hg.

As hypertension is a chronic disease and requires prolonged treatment it is essential that hypotensives for long term use be reasonably safe, tolerable, economical and of predictable and sustained action on blood pressure.

The use of combination of drugs to reduce raised blood pressure is desirable, especially when one drug by itself has restricted use because of fear of toxicity in high doses, or its action limited to one mechanism in physiology of blood pressure. The addition of another drug or drugs because of synergism then allows reduction in dosage of individual drugs and a smoother control with reduction in incidental side effects.

So a preparation, Arjin (Alarsin) containing selected indigenous drugs including Rauwolfia Serpentina was tried by me in 76 hypertensive patients. 'Arjin' was first introduced in 1949. It contains the following ingredients.

Punarnava (Boerharia Diffusa) (33.50mg), Apamarg (Acryanthus Aspera) (16.75mg), Anantinul (Hemidesmus Indicus) (16.75mg), Katuki (Picrorrhiza kurroa (16.75mg), Sarpagandha(Rauwolfia Serpentina) (134.00mg), Jatamansi (Nardostachys Jatamansi) (67.00mg.), Sherdimul (Succharum) (16.75mg), Jyotishmati (Malkanguni) (33.50mg), Bilva (Eagle Marcelus) (16.75mg), Arjun (Termenilia Arjuna) (16.75mg), Shilajit (Asphaltum Panjabinum) (16.75mg) Harde (Terminalia Chebula) (13.50mg).

This Arjin formula is a well-balanced combination of hypotensive, diuretic, antiarrthymic, laxative, liver corrective and general alterative herbal drugs of recognized values in the management of high B. P. and cardiovascular disorders. Besides, the synergistic action of these ingredients helps in rectifying the various factors in high B. P. without damaging cardiac, renal and hepatic parenchyma and tones cardiovascular system and calms the mind.

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MATERIAL AND METHODS

A total of 76 hypertensives were studied by me from July 1973 to October 1974 over a period of one year and three months. Patients were selected from either, sex, with no age restriction. Anti-hypertensive drugs were stopped at least 15 days prior to clinical trial. The minimal criteria for the drug trial acceptance were taken as patients with diastolic blood pressure of more than 90 mm. Hg. The ages of the patients varied between 26-74 years (Table 1).

Table I
Age Distribution

Age in years	No of cases
21-30	3
31-40	6
41-50	42
51-60	17
61-70	5
Above 70	3
Total	76

There were 58 males and 18 females (Table II).

TABLE II
Sex Distribution

Sex	No of cases
Male	58
Female	18

The patients were graded as having mild, moderate, severe and gross hypertension. 46 patients had mild (diastolic B.P. 90-110 mm. Hg), 26 had moderate (diastolic B P. 111-120 mm. Hg), 2 had severe hyper-tension (diastolic B.P. 121-140 mm. Hg.) and patients with gross hypertension (diastolic B.P >140 mm. Hg) were not included in trial (table III).

TABLE III
Grading of BP

Grade	Diastolic Blood Pressure	No of Cases
Mild	90-110 mm.Hg	46
Moderate	111-120 mm. Hg	26
Severe	121-140 mm.Hg	2
Gross	More than 140 mm.Hg	Nil

The following groups of patients were not included in the trial.

1. Patients, with incipient or overt left ventricular failure
2. Patients with diastolic blood pressure more than 140 mm. Hg
3. Hypertensive retinopathy grade IV
4. Patients with blood urea more than 60 mg%

In all the patients (Included in trial) complete blood count, routine urine examination, blood urea, glucose tolerance test, electrocardiogram, X-Ray and fundus examination were performed. The fundus changes were graded according to Keith and Wagner's classification. 21 of them showed normal fundus. 45 showed grade I changes, 9 grade II changes and one grade III changes. Electro cardiogram showed normal pattern in 48 cases, 28 showed abnormal electrocardiographic changes like nonspecific ST -T changes, ischaemic pattern, supraventicular ectopic beats and LVH. Seven patients had mild azotemia and 11 were hyperglycaemic.

The blood pressure was recorded in the supine position 5 minutes after rest and in the standing position one minute afterwards, The patients selected were seen daily during the first week. Subsequently at three days interval for a period of 3 weeks and at weekly intervals for a total period of 8 weeks. Initially the patients were given Arjin 1-2 tablets thrice daily for one week. The further doses were adjusted according to the recorded blood pressure.

The criteria for evaluation of response were as follows

1. Good: The response was considered good when blood pressure became normal (less than 140/90 mm Hg)
2. Moderate: The response was considered moderate if systolic or diastolic B P became normal or there was a fall in both systolic and diastolic pressure of at least 20 mm Hg
3. Poor: The rest of the cases

RESULTS

Out of 76 patients, 64 (84.21%) showed good response, 10 (13.15%) showed moderate response and 2 (2.63%) showed poor response. Of the 46 cases of mild hypertension, 42 had good response and 4 had moderate response. Of the 28 cases of moderate hypertension, 22 had good response, 5 had moderate response and only 1 had poor response. Of the 2 severe hypertensives, 1 had moderate response and the other one responded poorly (Table IV).

Table IV
Hypotensive response to 'Arjin'

Grade	No of Patients	Good	Moderate	Poor
Mild	46	42	4	-
Moderate	28	22	5	1
Severe	2	-	1	1
Total	**76**	**64**	**10**	**2**

The dose varied 3-8 tablets per day. There was no correlation between the severity of hypertension and the dosage required. The abnormalities in E C.G. or fundal changes did not affect the dosage required for the particular patient.

There were no side-effects like postural hypotension, bone marrow depression, G.I. disturbance etc so the discontinuation or reduction of drugs was not necessary.

DISCUSSION

The results of the trial confirm that 'Arjin' has a significant hypo-tensive action. Our results showed that "Arjin" when used 3-8 tablets per day, showed significant fall of blood pressure in the first week and no significant greater reduction was seen after the first three weeks. . For maintenance therapy 2-3 tablets per day was required. The absence of serious side-effects is the remarkable feature of the drug.

The mode of action of "Arjin" is probably due to diuretic effect and direct action on CNS. Diuretic effect is the result on reduction in blood volume and cardiac output, as well as reduction in peripheral resistance due to diminished sodium content in arterial wall. The ingredient Sarpagandha (Rauwolfia Serpentina) probably exerts its effect by depleting tissue stores of noradrenaline. The depletion may be the result of reduced uptake by stores rather than active release.

Arjin is most effective in mild and moderate hypertension. The great advantage is that it does not cause postural hypotension, so it is useful in patients suffering from side effects of sympathetic blockade drugs like guanethidine etc.

In this trial the antihypertensive effect of 'Arjin' has been studied and its side-effect if any has been tried to be observed. No attempt has been made to compare with other hypotensive drugs. It is essentially a study of hypotensive effect of 'Arjin'.

SUMMARY

1. Seventy six cases of hypertension irrespective of age of onset and level of blood pressure were treated with "Arjin".
2. There were 58 males and 18 females. The age of the patients varied from 26-74 years.
3. From the level of blood pressure, 46 were considered to have mild, 28 moderate and 2 severe hypertension.
4. Dosage used ranged 3-8 tablets per day. Duration of the trial ranged from 6 to 12 weeks; a mean of 8 weeks.
5. Good response was achieved in 64 cases (84.21%) moderate in 10 cases (13.15%) and poor response in 2 cases (2.63%) only.
6. Unlike other antihypertensives, the drug is found nontoxic to bone marrow, unattended by gastro intestinal upsets or adverse central nervous system effects.
7. Arjin was found superior to other hypotensives in view of its effectiveness in small doses, its onset of action within a week, maintenance of action with 2-3 tablets per day, and virtual absence of unpleasant and toxic actions.

CONCLUSION

'Arjin' was tried in hypertensive patients over a period of about 1 year and 3 months. It is very useful for mild and moderate hypertensive patients and for the maintenance therapy The remarkable feature is that it keeps the blood pressure at a lower level without producing any side- effects.

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