Abana Enhances the Blood Pressure Lowering Effect of Propranolol in Mild to Moderate Hypertension

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ABSTRACT
Fifty-four mild to moderate cases of essential hypertension were selected for a clinical trial with Abana along with conventional therapy. A careful monitoring was done to demonstrate the significance of combined therapy. Better results were obtained when Abana was given along with propranolol. It can be concluded that Abana reduces the dose of concomitant conventional therapy. Abana did not produce any adverse side-effects even after continuous oral administration.

INTRODUCTION
In this century essential hypertension has become a major cause of death due to renal and cardiac complications. According to Robert (1975), over one half of all heart attacks and two thirds of all cerebrovascular attacks occur in individuals who were previously hypertensive. For a number of years, workers have attempted to define the mechanisms responsible for the development of essential hypertension. Till recently, no unified concept has been developed to explain the aetiopathogenesis of essential hypertension.

Due to a multifactorial aetiology the management of essential hypertension is still complex. Several new drugs have been introduced with better clinical efficacy. But due to adverse side effects, single drug therapy is not found useful for adequate management of essential hypertension. Beta-blockers are found useful in the regulation of mild to moderate cases of essential hypertension. They are also advocated in severe hypertension along with other conventional drug therapy.

Several herbomineral drugs are found useful in the treatment of essential hypertension. Continuous use of such drugs does not produce any adverse side effects. Abana, which is a combination of several herbs and minerals, has shown clinical efficacy in the management of cardiovascular disorders. In the present work attempts have been made to assess the effect of combined therapy with Abana and propranolol in comparison to propranolol alone, in mild to moderate cases of essential hypertension.

MATERIAL AND METHODS
Fifty-four diagnosed cases of mild to moderate hypertension were selected for this study. Patients having systolic blood pressure below 170 mm Hg and diastolic blood pressure below 110 mm Hg were included. Cases with evidence of diabetes and cardiac involvement were excluded.

Fifteen cases were given propranolol in the dose of 40 mg t.i.d. Twelve cases received Abana in the dose of two tablets t.i.d., while the remaining 27 cases were put on combined therapy for 12 weeks. Careful clinical and laboratory investigations were carried out to monitor the blood pressure levels and biochemical parameters. The initial values were compared with those after 12 weeks of therapy.
RESULTS
Propranolol significantly reduced the systolic and diastolic blood pressures in the doses used in this study. Abana given alone brought about significant reductions in systolic blood pressure, but diastolic blood pressure exhibited insignificant reductions. In combined therapy where propranolol was given along with Abana, the fall in systolic blood pressure was more pronounced than with propranolol alone ($p<0.001$). Similarly diastolic blood pressure also dropped appreciably at the end of 12 weeks of combined therapy. From the Table given below, it is evident that combined therapy produces better clinical results than propranolol alone.

<table>
<thead>
<tr>
<th>Group</th>
<th>Systolic Blood Pressure (mm Hg)</th>
<th>Diastolic Blood Pressure (mm Hg)</th>
<th>Comparison: initial vs 12 weeks of therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Initial 12 weeks</td>
<td>Initial 12 weeks</td>
<td></td>
</tr>
<tr>
<td>Propranolol (N=15)</td>
<td>167.72 ± 18.73</td>
<td>107.62 ± 15.14</td>
<td>$p&lt;0.01$</td>
</tr>
<tr>
<td>Abana alone (N=12)</td>
<td>169.50 ± 18.10</td>
<td>108.32 ± 10.78</td>
<td>$p&lt;0.05$</td>
</tr>
<tr>
<td>Propranolol + Abana</td>
<td>171.26 ± 24.43</td>
<td>109.19 ± 13.23</td>
<td>$p&lt;0.001$</td>
</tr>
<tr>
<td>(N=27)</td>
<td></td>
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DISCUSSION
An ideal antihypertensive drug should lower the blood pressure by reducing the general precapillary resistance, since this is the demonstrable major abnormality in patients having persistent essential hypertension. Out of the galaxy of antihypertensive drugs currently available, only some have shown overall efficacy in the management of hypertension. Several factors must be considered before choosing any drug for the management of essential hypertension. Cost, frequency of dose and side-effects must be considered. Diuretics are also useful in the management of blood pressure but continuous use may cause hypokalaemia. Sowers, J.R. (1987) reviewed the significance of various drugs in the management of hypertension. Calcium channel blockers are now effectively used as monotherapy and in combination with other antihypertensive agents.

In spite of extensive research the treatment of hypertension is still empirical. One of the objectives of antihypertensive therapy is to control blood pressure with least inconvenience to the patient. The ultimate objective in treating hypertensive patients is to prevent complications and prolong life expectancy. Recently it has been emphasised that herbomineral drugs are useful in the management of cardiovascular disorders. In the present trial the beneficial effect of Abana has been studied. Abana given alone was found less effective in cases of persistent hypertension, but when it was given along with propranolol, better efficacy could be obtained by lowering the dose of this conventional drug.

It is evident from the results that changes are more marked in the combined therapy group than in the single therapy group. Earlier it has been reported that Abana reduces the circulating catecholamines in cases of cardioneurosis and sympathetic hyperstimulation (Dubey et al., 1986). The down-regulation of adrenergic receptors by Abana is responsible for the reduction of systolic and diastolic blood pressures caused by autonomic reactivity. The combination therapy has demonstrated rapid and sustained action on the blood pressure levels. The choice of such combined therapy should be based on several considerations. The important considerations are the patient’s personality, pre-symptoms, severity of hypertension and nature of complications. A rational correlation of these observations with a knowledge of pharmacodynamics and side-effects of the various drugs, and the socio-economic status of the patients, will help to arrive at a satisfactory antihypertensive programme.
Experimental trials have also provided identical results in combined therapy. Requirements of conventional therapy can be minimised and sustained results obtained by the therapy outlined.

REFERENCES
