Material and methods

The present study was done on subjects presenting to medicine OPD and emergencies and admitted to medicine wards of Maharani Laxmī Bai medical College, Jhansi during the period from August 2003 to September 2004.

The study has been done on patients admitted through OPD and emergency in Maharani Laxmī Bai Medical College Jhansi, hospital presenting with signs of focal neurological deficit lasting for more than 24 hrs.

Criteria for selection

Any individual presenting with sudden/acute onset of focal neurological deficit indicating towards a vascular cause will be included and will be evaluated further on the following lines.

1. Detailed history and clinical examination

2. Determining the following risk factors by investigations

A. Hypertension

1. Blood pressure measurement on admission and 2hrly thereafter for the first 24 hrs to estimate the mean systolic
and diastolic blood pressure. They would be then categorized as under.

**Classification of Blood Pressure**

<table>
<thead>
<tr>
<th>Category</th>
<th>SBP mmHg</th>
<th>DBP mmHg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>&lt;120</td>
<td>and</td>
</tr>
<tr>
<td>Pre Hypertension</td>
<td>120-139</td>
<td>or 80-89</td>
</tr>
<tr>
<td>Hypertension, Stage 1</td>
<td>140-159</td>
<td>or 90-99</td>
</tr>
<tr>
<td>Hypertension, Stage 11</td>
<td>&gt;or=160</td>
<td>or &gt;or=100</td>
</tr>
</tbody>
</table>

**B. Diabetes Mellitus**

Random Capillary Blood sugar (RCBS) & fasting blood sugar and 2hrs PP blood sugar estimation would be done. The patient would be diagnosed as a case of Diabetes Mellitus if any of the three conditions were met:

Symptoms of diabetes i.e polyuria, polydypsia, polyphagia, plus

RCBS >200mg/dl.

Or

Fasting plasma glucose > 126mg/dl

Or

Two hours plasma glucose > 200mg/dl during a GTT
B. Ischemic heart disease

ECG To look for any evidence of myocardial infarction or ischemic changes

Computed Tomographic scan of Head:

i) To know the cause of stroke whether hemorrhagic or infarct

ii) To know the site and extension of hemorrhage or infarct.

iii) To look for any evidence of previous infarct or hemorrhage

C. Dyslipidemia

Fasting blood samples of patients would be evaluated for lipid profile status

Manipulation of Blood pressure:

The second part of my work involves manipulation of blood pressure in the form of elevation of blood pressure and lowering of blood pressure.

Selection criteria of patients for the study group and control group for pharmacological elevation of blood pressure:

Patient’s (Group1) who develop fall in blood pressure and neurological deterioration within 48 hrs of admission as evident on clinical examination (having Mathew score of <65)\(^{103}\)

The MABP of these patients would be determined from the formula:
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The MABP of these patients would be determined from the formula \((SBP+2DBP)/3\)
The patients would be divided into two groups i.e. study and control group. The blood pressure would be elevated in the study group. This would be done using IV fluids, vasopressor, {phenylephrine in the dose (20-300 microgm/min)} over a period of 5 days.

The two groups would be then compared using unpaired ‘t’ test and the Degree of freedom and the ‘p’ value would be calculated from the table. Thus, the significance of blood pressure elevation and the outcome would be interpreted as significant or not.

The second part of manipulation involves lowering of blood pressure. The study group would comprise of patients having blood pressure $\geq 220/110$ mmHg even after 48 hours of admission. All patients in this group would undergo lowering of blood pressure by nimodipine and other antihypertensive drugs used orally.

The clinical outcome would be studied after 5 days of lowering of blood pressure. The patients blood pressure before and after lowering would be studied using paired ‘t’ test and t value and DF would be determined. Thus the significance of clinical effect of lowering of blood pressure on the outcome of the patients would be studied.