

# FREQUENCY OF HYPERTENSION AS A MAJOR RISK FACTOR IN STROKE PATIENTS

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## ABSTRACT

**Background:** Stroke is a common neurological cause of morbidity and mortality. Hypertension is one of the major risk factor for stroke. The aim of this study was to determine the frequency of hypertension in stroke patients.

**Methods:** This descriptive study was conducted on 100 patients of stroke admitted to Medical A unite of PGMI/HMC from Jan 2011 to June 2011. All the findings were recorded on printed proforma. Patients with focal neurological deficit of more than 24 hours, age more than 20 years and confirmed by CT scan brain to have infarct/bleed were included in study. Those with meningitis, encephalitis and space occupying lesion were excluded.

**Results:** Out of 100 patients seventy were male and thirty females. 23% patients were in age range of 51-60 and 44% in age range of 61-70 years. Hypertension was found to be the most common risk factor for stroke in 60 patients (60%).

**Conclusion:** Hypertension is the common and leading cause of stroke. It is essential to detect and treat it timely to reduce the stroke related as morbidity and mortality.

**Key words:** stroke, risk factors, and hypertension.

## INTRODUCTION

Stroke is defined as rapidly developing symptoms/signs of focal and at times global loss of cerebral functions lasting for 24 hours or more with no apparent cause other than that of vascular origin<sup>1</sup>. It is the cause of formidable burden of disability and morbidity to the patients and community<sup>2</sup>. It is the third most common cause of death in the world<sup>3,4</sup>. Most of the patients with stroke are admitted in secondary and tertiary care hospitals and significant proportion are left with partial or total disability, so measures should be taken to prevent Cerebrovascular accident by decreasing financial and social burden on family and community. The incidence and mortality of stroke vary in different population. In US it is 200 patients per 100,000 population while in Pakistan 250/ 100,000 population<sup>5</sup>.

Common risk factors for stroke are Hypertension, Diabetes mellitus, coronary artery disease, Smoking, Hyperlipidemia which are modifiable and treatable.<sup>7,8</sup> Hypertension is a major health problem in Pakistan with a prevalence of 17.9% in adult population. In this study we investigated hypertension as a risk factor for stroke patients presenting to Medical A unit of PGMI/HMC.

## MATERIAL AND METHODS

This study was carried out on 100 patients with stroke admitted to Medical A unit PGMI/HMC from Jan 2011 to June 2011.

Each patient was thoroughly evaluated by taking detailed history with special emphasis on hypertension, other major risk factors like diabetes

mellitus, smoking, hyperlipidemia were also evaluated and use of antihypertensive drugs were asked. Detailed clinical examination especially of neurological and cardiovascular system was performed. CT scan brain was advised to all patients to confirm the diagnosis of stroke. Routine investigations including FBC with ESR, Blood sugar, ECG were advised in all cases while in selected patient's lipid profile, Echo, carotid Doppler was done. All the findings were recorded in printed proforma.

Hypertension was diagnosed on the basis of past medical history of hypertension, history of antihypertensive medication or BP reading more than 140/90.

## RESULTS

100 patients with confirmed findings of stroke on CT scan brain were included in study. Out of 100 patients 70 were male and 30 female. Peak stroke prone age was 61-70 years in male (40 cases) and 51-60 years in female patients (20 cases).

Cerebral infarction was found in 70 patients while 30 had intracerebral hemorrhage on CT scan brain.

Hypertension as a common risk factor was present in 60 patients, in which, 50 were male and 10 female. Hypertension was present in 40 patients out of 70 cases of cerebral infarction while it was present in 20 patients out of 30 cases of cerebral hemorrhage.

## DISCUSSION

In this study male to female ratio is 2.33:1 which is comparable and similar to that of Amanullah, nazir shah 2.33:1<sup>9</sup> Asghar kamal, saddique aslam 3:1.<sup>10</sup>

In our study hypertension was found to be present in (60%) of cases which is similar to other national studies performed by Syed Riaz ul Hassan (60%)<sup>11</sup> and Asghar kamal (60%)<sup>10</sup>, Fayyaz (58%)<sup>12</sup>, Jehangir (56.04%)<sup>13</sup>, Khwaja and shakoor (56%)<sup>14</sup> while higher than that observed by Raza and Imran (49%)<sup>15</sup>, Vohra et al (50%)<sup>16</sup>.

Cerebral infarction in 70% patients was common than cerebral haemorrhage in 30% of cases which is similar to Jehangir (70.6%/29.4%)<sup>13</sup>, Raza and Imran (71.5% /28.5%)<sup>15</sup> and Amanullah (72% /28%)<sup>9</sup> respectively.

## CONCLUSIONS

This study confirm the findings of previous studies performed in Pakistan that Hypertension is the most common modifiable risk factor for stroke and need awareness, regular use of medication and changes in life style, so to reduce the morbidity and mortality of stroke in Pakistan.

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