HYPERTENSION IN PSYCHIATRIC PATIENTS
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SUMMARY
Known cases of hypertension and those fulfilling WHO criteria for diagnosis of hypertension were identified in psychiatric patients and compared with non-hypertensive psychiatric patients. Hypertension was detected in 141 (9.98%) cases, and was significantly more associated with elder age, married status, urban background and neurotic illness. The implications are in early detection and effective management of hypertension in psychiatric patients.

Introduction
Magnitude of essential hypertension in various part of the world and in different populations show marked differences. Higher prevalence rates are found in population undergoing rapid socio-cultural change, urbanisation and socio-cultural mobility (Lipowski 1980). Hypertension is a well recognised psychosomatic disorder, having both organic as well as psychological factors implicated in its etiopathology, aggravation and maintenance of hypertensive state. The exact relationship between hypertension and psychiatric illness is not known. Multiple issues require investigation such as variables that may contribute to the onset of both disorders, impact of psychological distress on hypertension, role of drugs etc. This study examines the prevalence of hypertension in consecutive psychiatric patients attending the out-patients department and their socio-demographic aspects, as a preliminary step in order to acquire a precise description of the correspondence between hypertension and psychiatric illness.

Material and Methods
The method involved a retrospective chart review of every third consecutive case to look for cases suffering from hypertension. Patients with a blood pressure higher than 140 mm systolic and 90 mm diastolic on two consecutive visits (WHO criteria for diagnosing hypertension, 1959) or those already diagnosed as hypertensive under treatment were identified and compared with non-hypertensive psychiatric patients on sociodemographic variables and clinical diagnosis. The relationship between psychiatric illness, especially depression was examined between the two groups.

Results
In all 1,413 cases were reviewed out of 4,240 total registrations. 141 cases had hypertension (9.98%). Hypertensive patients as compared with non-hypertensive psychiatric patients were more often elderly, married (80.1%, P < .001), from urban background (61%, P < .01) and had neurotic illness (30.5%, P < .001). The details with percentage distribution are given in the table. Depressive illness (endogenous and neurotic) were significantly more often (P < .05, by Z test for proportions) recorded in hypertensives as compared to non-hypertensive controls.

Discussion
The rate of hypertension in psychiatric patients in this study is comparable with 9.4% of psychiatric patients, noted in Rennie (1956) and also general population survey in India (Bhatia 1978). However, the rates are understandably lower than general hospital.
Table
Comparison of socio-demographic aspects of psychiatric patients with and without hypertension

| Variable          | Hypertensives | Controls | P     |
|-------------------|---------------|----------|-------|
|                   | N(141)  | %       | N(304) | %     |       |
|                   |          |         |        |       |       |
| Age               |          |         |        |       |       |
| 15-25 years       | 28(19.9) | 130(42.9) |
| 26-35 years       | 34(24.1) | 115(37.2) |
| 36-45 years       | 40(28.4) | 41(13.5)  |
| 46-55 years       | 39(27.6) | 20(6.5)   |       |
| Sex               |          |         |        |       | P<.001 |
| Male              | 88(62.4) | 192(63.2) |
| Female            | 53(37.6) | 112(36.8) | (N.S.) |
| Education         |          |         |        |       |       |
| Under Matric      | 84(59.6) | 182(59.9) |
| Matric            | 27(19.1) | 46(15.1)  |
| Above Matric      | 30(21.3) | 76(25.0)  | (N.S.) |
| Marital Status    |          |         |        |       |       |
| Single            | 28(19.9) | 124(40.8) |
| Married           | 113(80.1)| 180(59.2) | P<.001 |
| Background        |          |         |        |       |       |
| Rural             | 55(39.0) | 167(54.9) |
| Urban             | 86(61.0) | 137(45.1) | P<.01  |
| Diagnosis         |          |         |        |       |       |
| Schizophrenia     | 33(23.4) | 102(33.6) |
| M D P             | 24(17.0) | 88(27.3)  |
| Neurosis          | 43(30.5) | 65(21.3)  |
| Others            | 41(29.1) | 54(17.8)  | P<.001 |
| Depression        | 36(25.5) | 49(16.1)  | Z test (P<.05) |

population (Bhatia 1978). Because of wide variability in prevalence rates in epidemiological studies, the exact rates of hypertension in various disorders is not known (Lipowski 1980).

The reciprocal relationship between psychosis and psychosomatic illness (Nemiah 1975, Stevens 1973) is partly confirmed because significantly fewer schizophrenics and affective psychotics have hypertension. Ostefeld and D'Atri (1977) found blood pressure higher in rural Americans but most other reports have found hypertension to be higher in urban population. Higher rates in elderly could be due to increasing organic problems and atherosclerotic changes. Baldwin (1979) reported no difference from expected values of hypertensive or other circulatory diseases in schizophrenic patients.

The relationship between hypertension and depressive illness requires more elaboration. The prevalence rates of depression among hypertensives is often cited as 30% (Bant 1974, Huapaya and Ananth 1980, Wheatley, et al 1975). Out of 80 consecutive depressives examined in this study hypertension was observed in 18 (22.5%). Higher rates of depressive disorders among hypertensive patients were reported by Rabkin et al. (1983) and this was not explained by variables as age, sex or presence of a chronic medical condition. Hypertensives were significantly older as in the present study, however, other demographic variables were not examined.

The results of this study identify higher risk of hypertension in certain psychiatric patients. The implications are important in therapeutic management after early detection in
such cases. The problem gets complicated due to the risk of psychiatric symptoms especially depression, which is caused by many anti-hypertensive agents. Also, the results emphasize the need for longitudinal studies designed to disentangle causal factors in the relationship and etiologies of hypertension and psychiatric disorders.

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