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INCIDENCE OF HYPERTENTION IN PATIENTS PREOPERATIVELY TO SURGICAL INTERVENTION IN NISHTER HOSPITAL MULTAN

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Abstract:

Hypertension is a common preoperative anomaly in patients undergoing general surgery and may be associated with cardiovascular adverse events in the perioperative period.

Objective: *To know the prevalence and severity of hypertension in patients requiring general surgery in the preoperative period.*

Place and Duration: *The study was performed in the surgery department of Nishter Hospital, Multan for the period of one year from March 2015 to March 2016.*

Patients and Methods: *All patients undergoing general surgery in the Nishter hospital in Multan were included in the study. The pre-existing hypertension story of all patients was researched. All male patients and adult women aged 20 to 100 years were included in the study. All patients in resting state were measured first blood pressure and second blood pressure measurements in the operating room. Patients were categorized according to AHA criteria for blood pressure.*

Results: *590 patients (245 males and 245 females) were included in the study. Ninety-four patients (25 males, 69 females) were hypertensive (15%). 36 had stage-1, 44 had stage-2, 14 had severe hypertension. While 75 hypertensive patients were previously known, 19 patients were hypertensive during the study period.*

Conclusion: *The overall incidence of hypertension among adult patients operated on at Sir Ganga Ram Hospital is 15 percent. In this group of patients, stage 2 hypertension was more frequent.*

Keywords: *Prevalence, Hypertension, Surgical Patients*

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INTRODUCTION:

Hypertension is the most common cardiovascular disorder in developed countries. It is one of the leading causes of death and disability in most of Western societies. Comparative Risk Assessment The Co-operation Group identified hypertension as one of the major risk factors for morbidity worldwide. Cerebrovascular is the most important interchangeable risk factor for cardiovascular and renal diseases. Even in Pakistan, according to the National Health Survey, the prevalence of hypertension is 18 percent. Another study reported that the prevalence of hypertension in Pakistan is 25 percent. The most prevalent medical anomalies in surgical patients are the general prevalence of 20-25%. Hypertension is the most common cause of delayed surgical procedure on planned day of surgery. Preoperative hypertension is usually associated with a small increase in perioperative cardiovascular complications. However, uncontrolled severe hypertension is associated with high postoperative complications such as intracranial hemorrhage. Well-controlled hypertensive patients are under the risk of increasing blood pressure preoperatively. Patients with hypertension carry increased risk for unstable blood pressure and hypertensive emergencies during surgery. More than 10% of well-controlled hypertensive patients may have a preoperative blood pressure of 10. Even mild hypertensive patients are not without risk. Determination of blood pressure is the most important component of preoperative evaluation. A large number of individuals with hypertension are unaware of their condition and those with hypertension diagnosed, treatment is often inadequate. It is common in patients with preoperative evaluation for surgical procedures. Most elective surgery patients have only been able to determine individual blood pressure before coming to the operating room. If there is insufficient sedation as a previous sedation, there is a difference between blood pressure readings of preoperative preoperative evaluation and blood pressure values taken immediately before or during induction. During induction, sometimes it can be dangerous and severe hypotension occurs after surgical stimulation, severe hypertension that sometimes remains static despite antihypertensive drugs. Even if the patient's blood pressure remains under control during the procedure, an episode of hypertension may develop during extubation.

PATIENTS AND METHODS:

This study was performed between January 2013 and April 2013 in Sir Ganga Ram Hospital, Department of Anesthesiology, Nishter Hospital, Multan. Nishter Medical College is a tertiary education teaching hospital linked to Lahore. This cross-sectional observational study was performed between patients subjected to various elective procedures under general anesthesia and subarachnoid spinal block. Approval was obtained from the hospital ethics committee. Men and women between 20-100 years of age were included in the study. Patients were examined preoperatively. Blood pressure was measured the day before night surgery using a blood pressure monitor. All the readings were made while the patients were resting. All cases with known and undiagnosed hypertension were included in the study. Patients' hypertension was classified according to the American Hypertension Association, the International Society of Hypertension, and the Guidelines for the Management of ESH / ESC 2013 Hypertension (Table 1).

Table 1: Classification of Hypertension[11,12]

Category of Blood Pressure	Systolic Blood Pressure (mmHg)	Diastolic Blood Pressure (mmHg)
Normal	<120	<80
Prehypertension	120-139	80-89
Stage I Hypertension	140-159	90-99
Stage II Hyperten-sion	160-179	100-109
Severe Hypertension	>180	>110

The patient was also asked about the use of regular medication in cases of known hypertension. Statistical analysis of the data was performed using a statistical package for the social sciences. (SPSS-16).

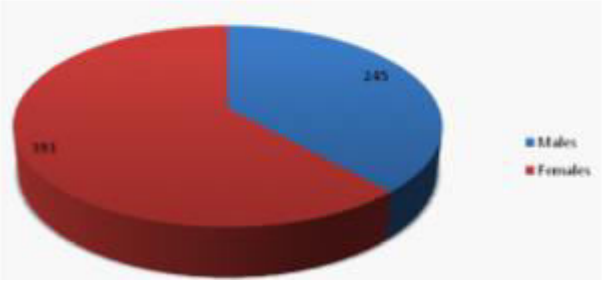
RESULTS:

The study population consisted of 590 patients (245 male, 245 female) (Figure 1, Table 2). Age range 20 to 83 years (average 38).

Table 2: Frequency of patients coming for surgery regarding sex, age and hypertension.

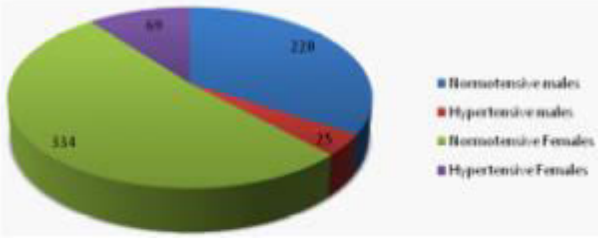
Variables		Frequency(%)
Gender	Male	245(38.4%)
	Female	393(61.6%)
Age		38±3.55
Hypertension		94(15%)

Figure 1: Sex distribution in the study.



94 (15%) of 590 patients had hypertension (25 males, 69 females) (Figure 2).

Figure 2. Hypertension among males and females

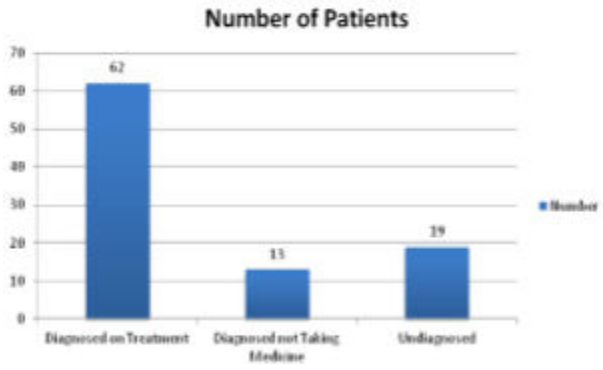


The prevalence of hypertension in male patients was 25/245 (10,2%) while it was 69/393 (17.56%) in women. 62 of the 94 hypertensive patients were already known and received treatment for this. The other 13 patients were also diagnosed with hypertension but did not receive any treatment. Nineteen patients were initially hypertensive (Figure 3, Table 3).

Table 3: Frequency of hypertensive patients coming for surgery regarding sex, treatment and antihypertensive agent

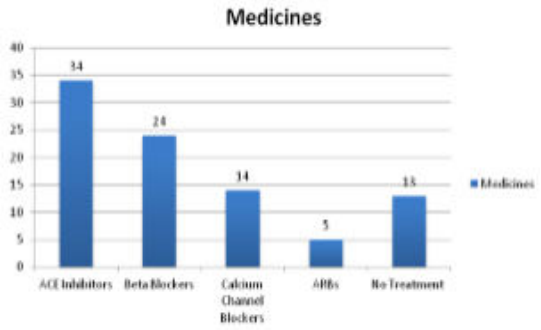
Variables		Hypertension patients
Gender	Male	25(26.59%)
	Female	69(73.41%)
Diagnosis	on treatment	62
	Not taking medicine	13
	Undiagnosed	19
Medicine	ACE inhibitor	34
	Beta blokers	24
	Calcium Channel Blokers	14
	ARBs	5
	Not treatment	13

Figure 3. Distribution of hypertensive patients



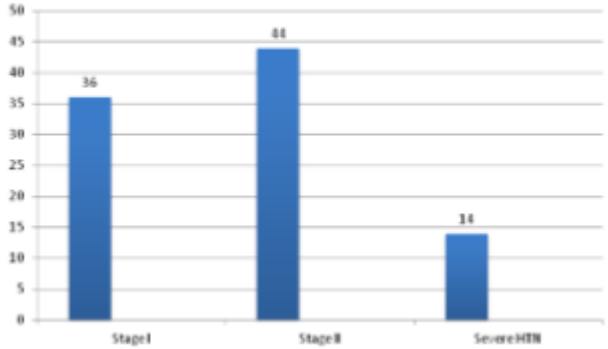
Hypertensive patients receive angiotensin converting enzyme (ACE) inhibitors, beta-blockers, calcium channel blockers, angiotensin receptor blockers (ARB), or hypertension treatment (Figure 4).

Figure 4: Number of patients taking different groups of drugs



73% belonged to systolic hypertension in stage I and stage II and 70% in combined diastolic hypertension. Stage II and stage II hypertension are more common than stage II hypertension stage I. Stage I hypertension was observed in 36 patients, 44 in stage II and 14 in severe hypertension (Figure 5).

Figure 5: Number of Patients with Stage I, stage II and severe hypertension (HTN)



DISCUSSION:

Presence of pre-treatment stage I and stage II. However, the advantage of postponement surgery in patients with severe hypertension has not been proven. In general, it is advisable to postpone surgery only in patients with a blood pressure> 180/110 mmHg. Different prevalence rates have been reported in different studies. In our study, the prevalence of hypertension among preoperative patients was 15 percent. Alabama. His work showed a prevalence of hypertension at around 10%. The difference in prevalence of hypertension may be due to differences in sex distribution. Contrary to our work, there were more men in their work than women (65% male, 35% female). In our study, there were 38.4% more males and 61.6% females than males. In our study, 17.56% of female patients and 10.2% of male patients had hypertension. The results of our study and Sapkota et al. They may be due to differences in the distribution of patients by sex between the two studies. The prevalence of hypertension also varies with the age of the study population. According to the Pakistan National Health Survey, the prevalence of hypertension has changed by more than 60% over the age of 70 in males and less than 10% in 18-19 years. A similar trend has been observed among women who are less than 5% in the 18-19 age group and up to 70% in the 60-69 age group. The prevalence of hypertension is suddenly increasing with the age of the population. There are marked differences in different ethnic groups in Pakistan. Among the Punjabs, a prevalence of 17.3 percent among males and 16.4 percent among females was reported19. Different prevalence rates have been reported among patients undergoing surgery. Jonas JB et al. reported a prevalence of 22.1% in patients older than 30 years who underwent ophthalmic surgery in India. The age difference between our study and Jonas et al describes the widespread difference. In our study, the majorities of hypertensive patients were stage I or stage II patients who were not usually associated with excessive complications in the perioperative period. For this reason, there is no need to reprogram these patients for elective surgical procedures. In modern days, in the presence of a well-equipped operation

team, uncontrolled blood pressure, it should not be the only reason.

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