Material
&
Methods
Material and Methods

This study was conducted on the patients attending the hypertension clinic run by the Department of Medicine M.L.B. Medical College, Jhansi. The unit of study was patients attending the hypertension clinic who had at least 3 or more visits during one year period. They were included on the JNC VII blood pressure criteria on at least on two separate occasions.

The history was recorded in detail for each patient. It included duration of symptoms, when and how was hypertension first detected, its course, family history, dietary history, treatment history and complications.

General as well as systemic examination was done to know the general condition, pulse rate, blood pressure, temperature, pallor, icterus, cyanosis, clubbing, edema, hydration, lymphadenopathy. Systemic examination was done to find out changes due to and associated with hypertension. This included examination of neck, to palpate and suscultate the carotids and thyroid. Examination of heart for size, rhythm and sounds. Lungs for rhonchi and rales were examined. The abdomen was examined for renal masses, bruits over aorta or renal arteries. Examination of extremities for peripheral pulses and edema and neurologic assessment were also done.

The investigations included a haemogram, urine analysis, blood glucose, blood urea, serum creatinine, a complete lipid profile (STC, HDL and Triglycerides), an electrocardiogram, a fundus examination, besides the height and weight of each
patient were recorded. Multiple readings of blood pressure were taken at each visit.

Some patients who were followed up during the peak summer and peak winter months were evaluated for any seasonal variation in the blood pressure.

WORKING PROFORMA

I. PERSONAL HISTORY

1. Name
2. Age / Sex
3. Religion
4. Education
5. Address : Present Permanent
6. Occupation
7. Smoker / Non-smoker : i. Bidi / Cigarette / Hukka
   ii. Quantity
8. Alcoholic / Non-alcoholic :
9. Socio-economic status :
10. Sector : Rural / Urban :
11. Marital status : Married / Unmarried
   i. Sons :
   ii. Daughter :

II. FAMILY HISTORY OF HYPERTENSION / DIABETES

1. Parental side Age at which detected Treatment taken
   a. Grand father / mother
   b. Mother / father
   c. Brother / Sister / cousins
   d. Sons / daughters
2. Maternal side
   a. Grandfather / mother
   b. Mother / Father
   c. Brother / Sisters / Cousins
   d. Sons / Daughter

III PRESENT HISTORY

1. Detection of hypertension:
   Age at which detected.
   When
   How course

2. Risk factors:
   a. Smoking
   b. Tobacco chewing
   c. Obesity
   d. Alcoholism
   e. Emotional stress
   f. High fat diet
   g. Operation (renal diseases)
   h. Diabetes mellitus
   i. Pregnancy induced hyper-tension, PET clampsia
   j. Pregnancy associated hypertension.

3. History of drug intake
   - Steroids
   - Oral contraceptives
   - Vaso pressors
   - Others (Nasal drops, Cough mixtures)

4. Treatment taken or not (if yes, kind of treatment).
   Dietary precautions
   Drug doses and duration

5. Whether continued / interrupted (if interrupted)
IV ROUTINE DIET

1. Breakfast
2. Lunch
3. Dinner
4. Any added meal

5. How many times you have used this meal in weeks.
   What type.
   Eggs, Meat, butter, Milk, Sweet:

6. Approximate fat consumption in week:
   Family:
   Individual:

7. Approximate calories / day:
   Family
   Individual

GENERAL EXAMINATION

1. Face: Cushingoid face
   Any other specific

2. Weight
   a. Observed
   b. Ideal

3. Height

4. Pulse:
   a. Radial
   b. Arterial wall
   c. Other peripheral pulses

5. BP (systolic / diastolic)
   a. Upper limbs
   Lying
   Sitting / Standing
   1st reading
   2nd reading
6. Pallor

7. Oedema  - Dependent
   - Peri-orbital

8. Skin – Xanthelasma, tendon, xanthoma.


10. Others.

**SYSTEMIC EXAMINATION**

**CARDIOVASCULAR SYSTEM**

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Duration</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palpitations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chest pain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dyspnoea / PND</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cough</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fainting / syncope</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sings : Mitral area, Pulmonary area, aortic area</td>
<td>S_1</td>
<td>S_2</td>
</tr>
</tbody>
</table>

Murmur, if any:

**COMPLICATIONS**

a. Left ventricular failure

b. Congestive cardiac failure

c. Ischaemic heart disease

d. Thromboembolism
LABORATORY INVESTIGATIONS
X-ray chest PA view
CT ratio
LAE, PAH, PVH
RVH, LVH

E.C.G
T.M.T

CENTRAL NERVOUS SYSTEM
Symptoms
Headache
Vomiting
Giddiness
Syncope

Duration

Treatment

Signs and complications, if any
Stroke (CVA)
Hypertensive encephalopathy
Seizures
TIA (Transient Ischemic Attack)
Disturbance of speech

Laboratory Investigations
Lumbar puncture CSF examination
CT-Scan

Ophthalmic Examination
Blurring of vision / Diminution of vision
Photophobia
Acuity of vision
Fundus – grade of hypertensive retinopathy
Kidney palpable / not palpable
Renal artery renosis, bruit present / absent
Evidence of recurrent UTI
Evidence of chronic obstruction
Evidence of acute / chronic renal failure
Renal transplantation

Laboratory investigations
Urine : Routine
        M/E
        C/S
Blood urea
Serum creatinine / urine creatinine
Serum renin
Serum Ca^{++}
I.V.P

Serum uric acid
Serum Na^+ + K^+
U/S abdomen
Kidney biopsy

ENDOCRINE AND METABOLIC
a. Diabetes mellitus : IDDM / NIDDM
   If yes, duration
   Blood sugar : Fasting
b. Evidence of hyperadrenalism :
   Cushing syndrome
   Pheochromocytoma
c. Evidence of hyper / hypothyroidism
   - Clinical
   - Lab
e. Evidence of hypercholesterolemia / hyperglyceridemia

Yes / No
Treatment
P.P
- Clinical
- Lab Investigations
- STC
- STG
- HDL

LDL
VLDL
LDL / HDL ratio
STC / LDL ratio

Routine Haematological investigations

<table>
<thead>
<tr>
<th>Haemoglobin</th>
<th>gm%</th>
<th>TLC</th>
<th>cells / cm</th>
</tr>
</thead>
<tbody>
<tr>
<td>DLC: P</td>
<td>%</td>
<td>L</td>
<td>E</td>
</tr>
<tr>
<td>G.B.P:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.S.R:</td>
<td>mm in one hour</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>