155 An Open Non-Comparative PMS Study to Assess The Efficacy and Tolerability of S. Amlodipine 2.5 / 5 mg in The Treatment of Hypertension

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This study evaluates the efficacy and tolerability of S-Amlodipine (S-Amlodipine 2.5/5 mg) in the treatment of hypertension. One thousand forty-two patients with hypertension from 121 centers across India were enrolled. All patients were given either 2.5/5 mg of Asomex depending upon the baseline BP values. Patients with history of MI, cerebrovascular accident, asthma, anemia, edema with earlier treatment and obesity were also included in the study. Results were analyzed by student’s ‘t’ test. Reduction in the average SBP and DBP in S-Amlodipine 2.5 and 5 mg group after 4 weeks of treatment was found to be statistically significant (P<0.0001). The average SBP and DBP reduced from 161/99 mm Hg to 132/84 mm Hg in the 2.5 mg group (n=948); and from 180/107 mm Hg to 138/86 mm Hg in the 5 mg group (n=194) after 4 weeks. Of the 247 patients, 243 (98.38%) reported resolution of edema after switching over from conventional Amlodipine to Asomex. Only 21 patients reported mild side effects, such as vertigo, tachycardia, cough, headache, fever, difficulty in breathing and edema (1.15%). S-Amlodipine 2.5 and 5 mg are effective and well tolerated in the treatment of hypertension and is an ideal switch over therapy for patients having peripheral edema with conventional Amlodipine.

156 Prevalence of Medical Disorders in Elderly Patients with Special Emphasis on Geriatric Hypertension

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The term elderly denotes person above 60 years. The increase in longevity has led to surge in elderly population (42% in 1991-2001) with increasing problems associated with ageing. Cardiovascular, cerebrovascular accidents, diabetes, respiratory disease, malignancy are more common in elderly. Hypertension is one of leading cardiovascular disorder reported in 40-50% geriatric patients in India. Hypertensions including isolated systolic hypertension is one of the major risk factor for stroke and coronary heart disease.

This study consisted of 1337 elderly patients of medical disorder admitted in Guru Gobind Singh Hospital, where male to female ratio 1.2:1. First time detected geriatric hypertension was found in 24% of patient. Prevalence of hypertension was more common in urban (60.8%) and lower socio-economic class (49.3%). Overall incidence in patients with hypertension of cerebrovascular accident was 15.7% out of which incidence of left ventricular failure (59.7%) myocardial infarction (24.3%), angina pectoris (16.2%). Incidence was more in smokers (81%). Nephropathy was present in 3%, hypercholesterolemia in 32.4%. Sensitivity to detect left ventricular hypertrophy by chest X-ray (PA) is 20.5% electrocardiography (37%) and echocardiography (50.5%). Most of patients were put on monotherapy, others on 2 drug or combination therapy and some managed by life style modification. Diuretics, ACE inhibitors and CCB’s were used in 30.6%, 30.6%, 26.7% respectively.

157 Enalapril Versus Losartan in Mild to Moderate Essential Hypertension

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Objective: To compare efficacy and side effects of Losartan with Enalapril in mild to moderate essential hypertension. Fifty cases of moderate and mild hypertension were selected, excluding those with secondary hypertension and congestive cardiac failure, 25 were administered Enalapril 10 mg per day for 3 months and BP was recorded fortnightly. The rest were given Losartan 50 mg per day and BP recorded fortnightly, side effects esp. giddiness, hypertension and cough and headache were noted during fortnightly visit.

Results: Losartan and Enalapril were both found to be effective antihypertensives Losartan reduced BP below 90 mmHg in 98% cases while in case of Enalapril these figures was only 60%. Adverse effects noted with Losartan were mild. Enalapril on the other hand produced significant side effects in the form of cough in 40% of cases and headache in 24% of cases.

Conclusion: Losartan in an effective antihypertensive drug with good safety record and minimal side effects. It was found to be superior to Enalapril in control of essential hypertension.

158 Aegle Marmelos (BEL) Leaves Extract (Extractum Belae Fructus Liquidum) in The Management of Essential Hypertension

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Aegle marmelos (Bel) has been considered potentially beneficial in a wide range of diseases. Widely and easily available leaves aqueous extract (Extractum Belae Fructus Liquidum) was used on 50 patients (25 males and 25 females) of mild to moderate essential hypertension inadequately controlled on present medication. The study protocol included detailed history, clinical examination and assessment of clinical efficacy of the extract. Twenty-five patients received 1 gm of extract dissolved in 1 cup of water twice daily with the usual drugs allowed to be continued. Trial was continued for one month when results were analysed. Twenty-five patients served as controls (on conventional medicines already being used). B.P. (systolic and diastolic) was measured initially and then weekly for 4 weeks. Results showed decrease in systolic and diastolic B.P. from 162 ±5.5 to 138 ± 4.1 and 108±3.5 to 88.6±2.7 respectively in the intervention group and from 162 ±5.5 to 152±4.1 and 108±101±3.0 in hypertensive group not receiving the extract.

Chemical analysis of extracts of various parts of Bel leaves revealed many constituents e.g. Marmalosin C a flurocoumarin derivative in addition to pectin, tannins, mucilage glycosides and essential oils. It is concluded that Aegle marmelos (Bel) leaves extract is a useful safe, easily available and affordable adjuvant to conventional drug management in essential hypertension.

159 To Study the Effect of ACE-Inhibitor on Left Ventricular Hypertrophy in Hypertension

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Objective: To see the effect of ACE-inhibitors on ventricular hypertrophy in hypertension.

Methods: Left ventricular hypertrophy is an independent predictor of cardiovascular mortality in patients of hypertension. The effect of ACE-inhibitors in reducing LVMi has been widely studied. An open trial was
conducted in 42 patients with mild to moderate hypertension. Ramipril 10 mg was administered to patients and they were followed for a period of 36 weeks every 4th weeks. At each visit both systolic and diastolic blood pressure were measured and routine laboratory investigations were performed. Left ventricular hypertrophy was diagnosed by left ventricular mass index (LVMI) > 125 gm/m² on echocardiography. LVMI was measured at 0, 20 and 36 weeks. Side effects were also recorded at each visit.

**Results:** Out of the forty two patients 33% (n=14) patients had LVMI > 125 gm/m² on echocardiography. The systolic and diastolic BP was reduced significantly by 25.72 mmHg and 12.29 mmHg respectively (p < 0.001) by ramipril. The LVMI decreased by 18 gm/m² (p < 0.001) at the end of 36 weeks. The LVMI regression was statistically significant. The correlation of LVMI regression to BP reduction was positive. The adverse effects were mild.

**Conclusion:** Ramipril significantly reduces the systolic and diastolic BP and the regression of LVMI. There is a direct correlation between fall in BP and LVMI.

**Key words:** Hypertension, Angiotensin converting enzyme inhibitors, Left ventricular hypertrophy.

### 160 Effect of Lifestyle Modification and Initial Drug Selection in Geriatric Hypertensive Patients

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This study was undertaken on 60 patients in Dept. of Medicine, S.M.J. Hospital and Research Center, Jabalpur in 2002-03 with the aim to access the effect of life style modification and initial drug selection in geriatric hypertensive patients.

In this study we have selected patients between 60-85 years of age. The level of BP that defines hypertension in older patients is identical to that user for younger patients above either 140 mm. Hg. systolic or 90 mm. Hg. diastolic. Group A and B are made. 30 patients are kept in group A and B each. Group A patients are advised in step-wise manner to modify their lifestyle by taking < 5 gms of common salt, reduce the wt. > 4 kgs and regular exercise of 20 minutes walk or jogging along with 12.5 mg of hydrochlorothiazide where as group B patients are given different antihypertensive like B-blocker, Ca⁺⁺ channel blocker and ACE inhibitors without life-style modification. One month observation shows, in group B patients need to change the drug because of side effect like chakkar, depression, fatigue, lethargy (BB), pedal oedema (CCB), cough (ACE) where as in group A we found gradual reduction of systolic (3.5-6 mm. Hg) and diastolic (2-5mm. Hg.) BP. reduction. diuretic hydrochlorothiazide (12.5 mg.) was added in as initial dose, side effects like hypokalaemia, hyperuricemia, glucose intolerance can be avoided by using lower dose.

Thereby it is concluded that in geriatric hypertensive life style modification like salt intake (<5 gm of common salt daily), regular 20 minutes isotonic exercise (walking/jogging), and reducing weight > 4 kgs. and thiazide diuretic are sufficient to deal with geriatric hypertension rather than aggressive therapy.

### 161 Single Drug VS. Combination Drug Therapy in Mild to Moderate Essential Hypertension

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With changing guidelines selection of anti-hypertensive drug therapy has always been controversial. Out of 317 patients attending the cardiology clinic of Govt. Medical College, Nagpur 231 patients were included in a prospective open randomized observational study to compare the effect of single drug therapy (e.g. Nifedipine, Atenolol, Envas alone in maximum doses) with combination drug therapy (e.g. Nifedipine and Envas in optimum doses) in patients with mild to moderate essential hypertension with respect to blood pressure control at the end of 12 weeks, patient compliance and drug related side effects. Patients were divided into 2 groups: Group I (n=94) Single drug therapy and Group II (n=137) combination drug therapy. Group I included Atenolol (n=50), Nifedipine (n=38) and Enalapril (n=49). Group II included Nifedipine + Atenolol (n = 40), Nifedipine + Enalapril (n = 25), Nifedipine + Hydrochlorothiazide (n = 6), Atenolol + Enalapril (n = 10), Atenolol + Hydrochlorothiazide (n = 3), Enalapril + Hydrochlorothiazide (n=10).

**Results:** 27.12% were controlled with minimum doses of single antihypertensive drug. Mean age was comparable in both groups where as there were more no. of male patients (M:F = 1.7:1) who received single drug therapy. In group I, out of 3 drugs, Enalapril achieved a better systolic BP control (mean systolic BP = 127.33 mm of Hg) and Atenolol achieved a better diastolic BP control (mean diastolic BP = 82.88 mm of Hg). The difference was not statistically significant but Atenolol was the best tolerated drug. Nifedipine was associated with a poorer BP control and side effects in the form of reflex tachycardia (23.68%) and oedema (13.16%). The number of uncontrolled hypertensives was more with monotherapy as compared to combination therapy. Maximum no. of uncontrolled hypertensives were in the nifedipine group. Dry cough was a complication seen in 4 patients (8.16%) receiving Enalapril. Combination drug therapy was associated with a statistically significant superior BP control; both systolic from 163.44 to 126.57 mm of Hg Vs. 163.57 to 132.59 with monotherapy) and diastolic (from 104.55 to 82.92 mm of Hg Vs. from 103.41 to 85.94 with monotherapy) and no side effects. It was well tolerated and patient compliance was good. Enalapril with hydrochlorothiazide was the best combination for BP control. Addition of diuretic in optimum doses to other drugs also gave a better BP control.

Combination drug therapy is superior to single drug therapy in control of mild to moderate hypertension.

### 162 A Study of Retinal Changes in Patients with Hypertension

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**Objectives:** To study 1. The common age group affected 2. The association between the risk factors and the retinal changes. 3. The frequency of occurrence of the different grades of hypertensive retinopathy. 4. The association between the severity and duration of hypertension and retinal changes. 5. The association between the involvement of retina and other end organs in hypertension. 6. The role of treatment regularity in the severity of ocular involvement.

**Material and Methods:** A total of 200 patients with systemic hypertension were taken up for the study randomly, after excluding diabetics. Relevant history like duration of hypertension, treatment regularity, family history of hypertension and history of smoking were elicited. The classification of hypertension was taken from The Joint National Committee’s sixth report. A thorough ophthalmological examination was carried out. Retinopathy grading was done using the Keith-Wagner system of classification. Urine examination, blood urea and creatinine were done and ECG was taken for all patients. LVH was diagnosed using Romhill-Este’s score.

**Observations:** Blood pressure rises with age in both sexes. 68% of cases were >50 years of age. Of the 13% of cases with Grade I Retinopathy, 7.5% were mild and 5.5% were moderate hypertensives. No patient was severely hypertensive in this grade. Of the 56% of patients in Grade II, 30.5% were mild, 16.5% were moderate and 9% were severe hypertensives. Of the 27% of cases in Grade III, 17% were severe, 7% were moderate and 3% were mild hypertensives. All the
8 patients with Grade IV retinopathy had malignant hypertension and were <40 years of age. All the 26 patients with Grade I retinopathy had duration of hypertension of < 5 years. Of the 112 patients in Grade II, 34.5% had duration of < 5 years and 21.5% had duration of > 5 years. There was no significant difference in Grade III (13.5% had < 5 years and 11% had >5 years of duration). But all the hypertensives with duration > 10 years constituting 2.5% of the total were in Grade III (p < 0.05). The mean duration of hypertension in the patients with malignant hypertension was 2 years with a range of 1-3 ½ years. ECG evidence of LVH was seen in 28% of patients while albuminuria was seen in 19%. Blood urea and creatinine were raised in one patient each in Grade II and Grade IV. Only 10.5% of patients in this study were on regular treatment. 3% of patients in this group showed Grade I, and 7.5% showed Grade II retinopathy.

**Conclusion:** 1. Majority of patients were above 50 years of age (68%). All the patients with malignant hypertension were less than 40 years of age. 2. History of smoking was associated with more severe grades of retinopathy. 3. Majority of patients (56%) were having grade II hypertensive retinopathy. 4. The relationship between the grade of retinopathy and duration of hypertension was significant. 5. Increasing grade of retinopathy was associated with increased proportion of patients having LVH and albuminuria. 6. Patients who were irregular in their treatment had more severe grades of retinopathy as compared to those who were on regular treatment.

### 163 Role of Lercanidipine, A New Calcium Channel Antagonist in Management of Hypertension

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**Objective:** The present study was carried out in the Department of Medicine, SCB Medical College, Cuttack to determine the role of Lercanidipine, a new calcium channel antagonist in mild to moderate hypertension.

**Material and Methods:** Fifty cases (M:30, F:20) in age group of 40-50 years of newly diagnosed essential hypertension in Stage-I and Stage-II were taken for study. Patients having DM, CAD, renal failure and endocrine disorders were excluded. In all cases haemogram, lipid profile, blood sugar, blood urea, s. creatinine, electrolytes, ECG chest X-ray and echocardiography were done. The cases were treated with lercanidipine 10 mg/day for 15 days. If BP not controlled dose was increased to 20 mg/day for 15 days and followed up for 4 months.

**Observation:** Out of 50 patients 42 (84%) were mild hypertensive, 8 (16%) moderate hypertensive 74% patients required 10 mg Lercanidipine while 26% - 20 mg of Lercanidipine for control. Average fall in BP was 16.6/8.4 mm of Hg and 17/10 mm of Hg at the end of 2 month and 4 months respectively. Average fall in mean arterial pressure was 16.1 mm of Hg and 12.1 mm of Hg at the end of 2 month and 4 months respectively. No significant change in heart rate was observed. ECHO revealed LVH in 12 patients (24%) prior to treatment, mean value LVM 150.3±24.8 gm/m² 133.7±21.4 gm/m². After 4 months of treatment mean value reduced to 133.7±21.4 gm/m² indicating complete regression of LVH. Only 1 patient developed ankle oedema.

**Conclusion:** Lercanidipine is an effective antihypertensive drug in mild to moderate hypertension, without any significant side effect.

### 164 Young Hypertensive with Aortoarteritis and Homocysteinuria

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A 22-year-old female presented to the medicine emergency with complaints of breathlessness, anorexia, dull aching abdominal pain for past 3 months. The patient had tubercular lymphadenopathy 2 years back for which she took complete course of antitubercular therapy. On examination patient had marfanoid habitus, hypertension, all peripheral pulses were palpable and no renal bruit was heard. Cardiovascular examination revealed pansystolic murmur at apex with tender hepatomegaly about 5 cm below costal margin per abdomen. Investigations revealed microscopic hypochromic anaemia, Chest X-ray showed cardiomegaly. USG abdomen showed increased cortical echogenicity in bilateral kidneys with multiple calcific plaques in aorta. Doppler study revealed decreased intrarenal vascularity, non-visualization of left main renal artery and prominent calcific spots in aorta. Echo study showed severe mitral regurgitation, mild aortic regurgitation with 25% ejection fraction. MRA abdomen and MR angiography showed irregular outline of abdominal aorta with irregular calcific plaques and intimal thickening of the left main renal artery. Cyanide nitroprusside test for homocysteinuria was positive. Thus the patient had features of both homocysteinuria and aortoarteritis. Whether this was coincidental or cause and effect will be discussed.

### 165 LV Mass Regression by Antihypertensive Drugs with Special Reference to Hyperinsulinemia

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Left ventricular hypertrophy (LVH) is an important and independent marker for future cardiac events. Several antihypertensive drugs, besides lowering BP, also cause LV mass (LVM) regression. Aim of the present study was to assess if reduction of hyperinsulinemic state has anything to do with LV mass regression. Non-diabetic patients with stage I and stage II hypertension were screened for increased LV mass and hyperinsulinemia. The LV mass was derived from echocardiography using Devereux formula (LVM = 1.04 • (IVSd + PWTi + LVIDd)² - (LVIDd)³) - 16.34). Increased LV mass was diagnosed by values above 134 G/m² for men and 110 G/m² for women. Plasma insulin was assessed by radioimmune assay in patients with increased LV mass. Hyperinsulinemia was diagnosed when plasma insulin level was above 30 µU/ml.

We selected 58 hypertensive patients with increased LV mass and hyperinsulinemia and divided them into 2 groups. Group A received telmisartan, an angiotensin receptor blocker (20 - 40 mg/day) and the group B received bisoprolol (5-10 mg/day), a cardioselective both blocker. Echo and plasma insulin level assay were repeated 16 weeks after initiation of therapy. The LV mass was reduced from 160 ± 24.3 to 129 ± 17.4 G/m² (p < 0.01) in group - A and from 163 ± 25.6 to 154.1 ± 22.7 G/m² (p = ns) in group B. The plasma insulin level decreased from 51 ± 11.2 to 20.7 ± 5.6 µU/ml in group A (p = 0.01) and from 57.8 ± 8.7 to 53 ± 7.9 µU/ml in group B (p = ns). Reduction of BP was similar in both groups. We conclude that telmisartan was superior to bisoprolol in reducing the LV mass. It may be due to better reduction of hyperinsulinemic state by telmisartan, because BP reduction was similar in both groups.

### 166 The Role of Lifestyle Associated Risk Factors in Development of Hypertension

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**Objective:** To assess the relation between life style associated and other risk factors and the development of hypertension.

**Design:** 2:1 Case Control study. **Period:** June 2001 to December 2002.

**Setting:** MGIMS, Sevagram

**Participants:** Indian males and females attending the Medicine OPD at
MGIMS, Sewagram with SBP > 140 mmHg or DBP > 90 mmHg taken as cases and twice the number of the cases recruited as controls from the same population

**Observations:** A Positive correlation found between hypertension and a high WHR (OR=2.44, 95% CI of 1.21 to 5.24), high BMI (OR=6.26, 95% CI 3.05-13.31), Smoking (OR = 2.77, 95% CI 1.45 - 5.31) after logistic regression.

**Results:** Smoking, raised BMI and WHR are important risk factors that lead to hypertension.

### 167 To Evaluate The Efficacy of Valsartan in Hypertension with Special Reference to Left Ventricular Mass

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Sn Guru Ram Das Institute of Medical Sciences and Research, Amritsar.

The present study includes 30 cases of established hypertension from stage I to III. All patients were given valsartan 80-160 mg for period of 24 weeks. All the 30 cases were subjected to ECG, Chest X-ray and 2D-echo cardiography before and after 24 weeks of therapy. In addition to lipid profile and measurement of LV mass other routine investigations were also carried out. LV mass was calculated by formula of Devereaux LVM=1.04 [LVID+PHW+IVS]-13.64. Both male and female with age of 40-70 years with M:F ratio 1:5:1 were included in study. Average BP before treatment was 160/105. 14 out of 30 cases had evidence of LV hypertrophy with increase in LV mass more than 200 gm in 2D-echo. After 24 weeks. There was significant fall in DBP by 10-15mm Hg (P<0.001) and SBP by 25-30mm Hg (P<0.001). There was significant reduction of mean LV mass from 310.6±47.08 to 242.5±51.1 gm (P<0.05). The IVST and LVPWT also decreased significantly after 24 weeks. However there was no significant alteration in lipidogram, FBS/BUN after 24 weeks of treatment. Though side effects like headache, fatigue, cough, dizziness were also observed in few of the patients. Yet these side effects were not persistent. It was concluded that valsartan is an effective antihypertensive drug to control mild to moderate hypertension and has additional benefit of reducing LV mass (an independent risk factor for CAD) without any deleterious effect on lipidogram and other biochemical parameters.

### 168 Renewed Interest in Low-Dose Diuretic Therapy as Drug of Choice in Hypertensive Patients without Compelling Reasons

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Treatment of hypertension is constantly changing over decades. Advent of newer classes of antihypertensive drugs such as calcium channel blockers, angiotensin converting enzyme inhibitors and angiotensin receptor antagonists has eclipsed the use of conventional first-line drugs such as diuretics and β-blockers. Stepped care treatment has been replaced by individualized treatment approach. Diuretics, in particular, are now seldom used although they are still considered as one of the most important class of anti-hypertensive agents. Most of the physicians doubt about their efficacy and are afraid of its adverse effects on metabolic profile. To explore into the efficacy and safety of diuretic therapy, we recently evaluated the response of hydrochlorothiazide 12.5 mg daily, given for a period of 6 weeks, in 72 patients of stage I, stage II and isolated systolic hypertension, as defined by JNC-VI criteria. It produced slow and sustained declined in blood pressure reaching maximum efficacy from 6 weeks onwards. It controlled blood pressure in 100% patients of stage I hypertension, 68.75% of stage II hypertension and 88.88% patients of isolated systolic hypertension. It did not produce any significant (p>0.05) alteration in biochemical parameters in any group of the patients. In view of good therapeutic response, no serious adverse events and very low cost, we strongly feel that low-dose diuretic therapy should be used more often rather than being neglected. Interestingly, JNC-VII criteria, published very recently, support our above contention.

### 169 Study of Neurocognitive Dysfunction in Young Hypertensive Subjects

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**Objective:** The aim of this study was to investigate that younger hypertensive subjects have cognitive dysfunction, mostly due to abnormalities of cerebral blood flow.

**Methodology:** Twenty-four patients (19 males and 5 females) with hypertension and 14 healthy control subjects (12 males and 2 females) were enrolled. Hypertensive subjects were recruited according to the following inclusion criteria; age-20 to 45 years with raised blood pressure (according to JNC VI and WHO-ISH). Exclusion criteria: diabetes, hyperlipidemia, any h/o neurological deficit, smoking and alcohol consumption. Cognitive functions was done by following methods; i) Bender Gestalt test, ii) Visual memory retention test, iii) Digit symbol substitution, iv) Digit forward test v) Digit backward test, vi) Delayed recall test, vii) Immediate recall test, viii) Koh’s block design test.

**Results:** Healthy subjects were comparatively younger (mean±SD: 30.8±5.2 years) than to the hypertensive subjects (33.7±5.7 years). The hypertensive subjects had significantly higher BMI (mean±SD: 23.7±4.0 kg/m²) (p=0.02) as compared to the Healthy subjects (20.5±3.5 kg/m²). There were no significant differences in the mean values of waist circumferences, hip circumferences, sigma 4SF and %BF amongst hypertensive and healthy subjects. The cognitive functions assessed for attention, concentration, verbal memory, visual memory, Visio-motor depth perception, and planning and organizational ability was not found significantly impaired in healthy subjects. Details of cognitive functions and correlation in hypertensive patients shall be presented.

**Conclusions:** The hypertensive patients have significantly high BMI. The healthy subjects found normal cognitive functions.

### 170 Hypertension and Correlation with Target Organ Damage (TOD) / Associated Clinical Conditions (ACC)

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Long standing hypertension can lead to target organ damage (TOD) and several complications leading to associated clinical conditions (ACC) which can increase the mortality and morbidity. There are five different TOD / ACC associated with hypertension e.g. (1) CVS-left ventricular hypertrophy, coronary artery disease, congestive heart failure (CHF), PTCA / CABG (2) CNS-CVA, TIA, IMT >0.8 mm (3) peripheral vascular disease (4) hypertensive retinopathy and (5) nephropathy. The study was conducted to evaluate the presence of number of TOD/ACC according to severity of hypertension, in order to risk stratify and optimize the treatment of hypertension. The study included 235 patients (age, 18-90 yrs., mean - 54 yrs., male-169). The results are shown as below:-

<table>
<thead>
<tr>
<th>Grades of hypertension</th>
<th>(n=235)</th>
<th>No. of TOD /ACC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gr. I</td>
<td>127</td>
<td>0.5</td>
</tr>
<tr>
<td>Gr. II</td>
<td>80</td>
<td>1.6</td>
</tr>
<tr>
<td>Gr. III</td>
<td>28</td>
<td>2.3</td>
</tr>
</tbody>
</table>

Thus, it can be concluded from the study that more severe grades of hypertension (Gr. II and III) is associated with more severe TOD / ACC
and therefore need more extensive diagnostic evaluation and treatment to prevent these complications to reduce the mortality and morbidity.

### Immunology

#### 171 Wegener’s Granulomatosis - A Case Report

**Niyogi Mihir**  
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46 yrs. old male presented with chief complaint of recurrent epistaxis for one and half year, which was being treated as chronic sinusitis with associated CSOM. Detailed inquiry revealed following history: Chronic dry cough, progressive breathlessness and weakness - 1 yr; recurrent haemoptysis - 1 month; oral and nasal ulcers, painful dysphagia, hoarseness of voice - 2 weeks polyarthritides - 1 week. Neurologic symptom were progressively cumulative sensory deficit of distal parts of limbs and muscular weakness over one year. Patient’s left lower limb was especially very weak and was unable to stand. Physical examination - Low general condition, mild paller. No lymphadenopathy, cyanosis, purpura, skin nodule. Patient was febrile (101°F) with tachycardia (106/ min) mild hypertension (BP-160/100mmHg). Symmetric polyarthritides involving shoulder, hip and knee joints were present bilaterally. Chest - Harsh vesicular breath-sound with expiratory rhonchi and scattered moist sounds. CNS - Bilateral sensorimotor distal peripheral neuropathy with asymmetrically more weakness of left lower limb. ENT - Review: bilateral maxillary sinusitis with nasal mucusal ulcers, laryngitis. Investigations revealed: Hb -12.3 G%, ESR - 90mm, mild polymorphonuclear leucocytosis. Urine R/E: Alb + RBC + Blood urea - 41 mg% and marginally raised S. Creatinine (1.7mg%). ECG - NAD. Chest X-Ray - Bilateral soft infiltrative shadows, especially perihilar and lower zones. X-Ray RNS - Bilat maxillary sinuses. Serological parts: C-ANCA and CRP positive. ASO, Rheumatoid factor and ANA - negative. IgA - raised. Case was diagnosed as Wegener’s granulomatosis. Treatment with cyclophosphamide and corticosteroid was initiated. Patient however developed acute anterior myocardial infarction soon on sixth day and expired, apparently due to acute coronary vasculitis. The case is reported for its rarity. The classical triad of upper and lower respiratory tract involvement and renal involvement is hallmark of Wegener’s Granulomatosis. In the present case, evidence of various other systemic involvement was noteworthy.

#### 172 A Cluster Bomb

**Rakshith KC, Nagaraja MV, Menon Krishnakumar, Verma Muralidhar**  
Kasturba Medical College, Manipal

A 45 year lady who was a known case of bronchial asthma on oral bronchodilator presented with multiple joint pains since 2 years. Joint involvement was symmetrical, involving large and small joints with h/o morning stiffness. There was also h/o lower limb proximal muscle weakness. X-rays showed periarticular osteoporosis, RA factor was positive (titer 1:80), ESR was high (135 mm), CRP was positive (24). On investigating her we found she had iron deficiency anemia with low Hb (8.5), low mcv, low serum iron (31), low ferritin (12.1) and high TIBC (270). Thyroid function test suggestive of primary hypothyroidism with TSH of 99. Patient had significant postural fall in blood pressure with low basal levels 5.3 mcg/dl. Hence ACTH stimulation test was done which showed inadequate response to ACTH stimulation. Basal ACTH levels were also high suggesting primary addison’s disease. She was treated with DMARD’s steroids with maintenance dose, thyroxin and inhaled bronchodilators. Above case is presented with a intention to highlight how a cluster of autoimmune diseases can deceptively be present together and the necessity to recognize them for timely intervention.

#### 173 An Unusual Presentation of Primary Amyloidosis

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Amyloidosis, also known as lardaceous or waxy disease, is a deposition of insoluble, fibrous amyloid proteins, mainly in the extracellular spaces of organs and tissues. Kidney, gastrointestinal tract, heart, skin and nervous system are commonly involved in amyloidosis. Involvement of other systems such as lungs, musculoskeletal system, endocrine system, lymph nodes etc. is uncommon. We report a case of primary amyloidosis with involvement of organ systems not commonly involved and who was offered treatment with good initial response. A 48 year female presented with 3 year history of progressively increasing bilateral lower limb swelling, multiple subcutaneous lesions over back and neck, macroGLOSSia and constipation. There was no history of cardiorespiratory or renal symptoms. There was no history of fever, diabetes, hypertension, chronic infection, fibrinosis. On examination, she had macroGLOSSia, bilateral inguinal and axillary lymphadenopathy and lower limb lymphedema with overlying skin changes. There were multiple subcutaneous nodules all over the body with pseudohypertrophy of muscles. Biopsies taken from inguinal LN, subcutaneous nodule, tongue and biceps muscle showed amyloid deposits. There was no evidence of cardiac, renal or nervous system involvement. CECT abdomen revealed thickening of colon and rectal wall. Patient has received two cycles of chemotherapy with cyclophosphamide and prednisone with substantial decrease in macroGLOSSia and muscle pseudohypertrophy. This was an unusual presentation of primary amyloidosis. Except for macroGLOSSia, that was characteristic, other manifestations were unusual. Commonly involved organ systems were spared in the presence of amyloid deposits at rare sites. Such atypical presentations of amyloidosis should be kept in mind so that early diagnosis can be established and treatment initiated before any major organ system involvement occurs.

#### 174 Clinical and Immunological Profile of Primary and Secondary Antiphospholipid Syndrome in a Tertiary Care Service Hospital

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**Aim:** To study and analyse the various clinical and immunological profile of primary and secondary antiphospholipid syndrome (APS)

**Material and methods:** This observational study was conducted at Rheumatology and Haematology departments of Command Hospital (SC), Pune from Aug. 2000 - May 2003. All patients fulfilling the American College of Rheumatology (ACR) criteria for antiphospholipid syndrome were included in the study. Detailed, clinical evaluation and investigations were done to confirm the diagnosis and to document various thrombotic manifestations. These included complete blood count, urinalysis, ESR, CRP, ANA, RF, ANA profile, antiphospholipid antibody tests, lupus anticoagulants, and phospholipid dependent coagulation tests, in addition to imaging and Doppler modalities.

**Observations:** Forty-five patients fulfilled the ACR criteria and were included in the study. Mean age of patients was 37 years (range 18-65 years) and mean duration of disease was 3 years (range 1-52 months). The cohort consisted of 38 females and 12 males. Primary APS was present in 40% and secondary in 60%. Systemic lupus erythematosus was the commonest cause of secondary APS. 5 patients had catastrophic