

**Material and Methods:** During the last 20 years, monitoring of ABP has been available on request at the outpatient hypertension clinic. Information was gathered from 498 randomly selected measurements undertaken during a 3-year period from 1998-2000. All ABPs were measured with Spacelab 90207. For 439 of the measurements, the reason for referral was given.

**Results:** The patients (52% women, age  $55.8 \pm 14.8$  years, mean  $\pm$  SD) had referral blood pressure  $166.3 \pm 22.4/98.8 \pm 10.9$  mmHg, with less than 3% with systolic (S)BP  $< 140$  mmHg, while 24-h ABP was  $138.6 \pm 16.1/83.1 \pm 11.0$  mmHg. The diagnosis of hypertension was questioned in 42.2%, while in another 10.8% white coat hypertension was suspected. Whether patients had adequate blood pressure control was asked in 19.3%, while suspicion of resistant hypertension was given as a reason in 9.0%. In 6.0% hypotensive episodes were assumed, while in 12.7% no reason for referral was stated.

**Conclusion:** In primary practice ABP measurements were mainly requested to confirm the diagnosis of hypertension rather than to ascertain adequate blood pressure control. ABP measurements should be encouraged not only to ensure proper diagnosis, but also to make certain that hypertension is adequately treated.

#### PP.25.21 EFFECTIVENESS OF A BLOOD PRESSURE EDUCATIONAL AND EVALUATION PROGRAM FOR THE IMPROVEMENT OF MEASUREMENT ACCURACY AMONG NURSES

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**Aim:** To assess the procedure for measuring blood pressure among hospital nurses and to assess if a measurement training program would improve measurement technique and accuracy.

**Methods:** 160 Molinette hospital nurses (10% of all hospital nurses) participated to the study. Italian society of hypertension (SIIA) guidelines were used to develop the blood pressure educational program. The program was based upon theoretical and practical lessons and was one day long, and was conducted by trained nurses and physicians afferring to the Hypertension Unit. An evaluation of nurses measuring technique and accuracy was done before and after the program, by using a 10 items check. Moreover we calculated the differences between measured and effective BP values before and after the training program.

**Results:** We showed, at baseline evaluation, an inadequate performance on some points of clinical blood pressure measurement technique, in particular: only 10% of nurses control the arm diameter before placing the cuff, 4% measure BP in both arms, 80% placed the stethoscope under the cuff, 43% did not remove all clothing that covered the location of cuff placement, did not comfortably seated the patient with the legs uncrossed and the back and arm supported. After the training we found a significant improvement of the technique for all items. About the accuracy of measurement we found that the difference between measure and effective measurement was significantly reduced after training, particularly for SBP. We didn't observe significant difference of measurement knowledge between nurses working in different realities such as Medical or surgical departments.

**Conclusions:** Periodical education in BP measurement may be required, and this could significantly improve the technique and consequently the accuracy.

#### PP.25.22 MICROLIFE WATCHBP FOR HOME BLOOD PRESSURE MEASUREMENT MORE ACCURATE IN 'DIAGNOSTIC' MODE COMPARED TO USUAL MODE

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**Background:** Patients often fail to follow advised schedules for home blood pressure measurement (HBPM). Microlife recently developed the Watch BP Home device with a 'diagnostic' mode, allowing only two readings at fixed time slots in the morning and evening for 7 days, according to the European Society of Hypertension recommendations. In 'usual' mode measurements at all times are accepted. A formal assessment of the added value of the 'diagnostic' mode on accuracy has not yet been performed.

**Methods:** We instructed and randomized 99 hypertensive patients to measure their BP at home in either the usual or diagnostic mode according

to ESH HBPM recommendations. Patients were asked to report their BP values in a logbook. They were not informed that we were to compare their logbook entries with the device memory.

**Results:** The mean BP retrieved from the memory was  $148.5 \pm 22.8/87.6 \pm 10.3$  for diagnostic mode and  $146.8 \pm 17.3/88.9 \pm 10.7$  for usual mode. In the diagnostic mode 43.2 % had full adherence to the schedule, in the usual mode only 20.0 % had full adherence (p 0.01). Unscheduled measurements were performed by 23.6% in the usual mode. Missing readings were found in 45.5% of patients in the diagnostic mode and 47.3 % of patients in the usual mode (p 0.86). Fictional data were found in 13.6% of patients in the diagnostic mode and 10.9% of patients in the usual mode (p 0.68). Omitted readings were found in 2.3% of patients in the diagnostic mode and in 36.4% of patients in the usual mode (p 0.00).

**Conclusion:** Patients performing HBPM in the Microlife Watch Home BP 'diagnostic' mode had a greater adherence to the ESH measurement schedule. The 'diagnostic' mode is a useful feature, and improves accuracy of home blood pressure measurement.

#### PP.25.23 CEREBROPROTECTIVE PROPERTIES OF NEBIVALOL IN PATIENTS WITH ARTERIAL HYPERTENSION ASSOCIATED WITH TYPE 2 DIABETES MELLITUS

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**Objectives:** Aim of the study was elucidate peculiarities of influence of nebivalol on 24- hours blood pressure (BP) profiles and changes of parameters of cerebral perfusion in patients with arterial hypertension (AH) associated with type 2 diabetes mellitus.

**Methods:** 56 patients with <sup>2-222</sup> degree AH associated with type 2 diabetes mellitus was examined. At baseline and after 4 months of treatment with nebivalol in a 24- hour dose 5 mg we carried out BP monitoring, single photon emission computer tomography of the brain, and assessed the state of carbohydrate and lipid metabolism.

**Results:** According to data of 24-hour BP monitoring marked lowering of BP parameters occurred under the influence of treatment. This was accompanied with 31% decrease of the number of hyperperfused sectors of the brain ( $\chi^2 = 5.84, p = 0.012$ ). During adenosine test number of hypoperfused sectors of the brain decreased to 23 % ( $\chi^2 = 1.89, p = 0.162$ ) what performed for a tendency to improvement of reactivity of cerebral vessels in response to vasodilating influences.

**Conclusion:** Nebivalol exerted favorable effect on metabolic parameters and lowering of level postprandial glycemia in dynamics of treatment was significant. The results of the study demonstrate positive effect of treatment of patients with arterial hypertension associated with type 2 diabetes mellitus with nebivalol (5 mg/day).

#### PP.25.24 PREVALENCE OF MASKED HYPERTENSION IN DIFFERENT GROUPS OF MEDICATED PATIENTS

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**Objective:** The problem of masked hypertension (MH) in medicated patients is very important due to their high cardiovascular risk. The aim of our study was to determine the prevalence of MH in various patients' groups.

**Design and Method:** Two groups of patients with the stable hypertension grade 1-2 were compared. Group I included 219 patients with the single measurement of clinical (CBP) and 24h ambulatory blood pressure (ABP) after 4-8 weeks of monotherapy by 9 antihypertensive drugs. Group II included 39 patients from cross-over randomized trial of amlodipine and spirapril. These participants underwent at least 7 visits to the clinic for CBP control. ABP monitoring was performed at the end of each treatment course (4 weeks). The additional diagnostic methods were: ECG (in group II), General Well-Being Questionnaire (GWBQ). MH was determined as  $CBP < 140/90$  mm Hg and daytime  $ABP \geq 135/85$  mm Hg. To summarize the data the analysis of 2x2 contingency tables was done. The multivariate logistic procedure in stepwise mode and Spearman correlation analysis were used for assessment of MH predictors in groups I and II respectively. The analysis models were sex and age adjusted.

**Results:** The prevalence of MH in group I was 11.5%, in group II - 37.5-41.9%. We found initial differences between groups: age ( $57.7 \pm 0.6$  and