PP.01.14 HOME BLOOD PRESSURE IN KIDNEY TRANSPLANT RECIPIENTS (KTR)- VALIDITY OF DIFFERENT SCHEDULES OF SELF-MONITORING

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Objective: Office blood pressure (OBP), 24-h ambulatory monitoring (ABPM) and home self- monitoring (HBP) allow assessing BP control in treated HT patients. For HBP, ESH guidelines recommend 7 days of measurements but that duration is questioned. The present study analyzed the degree of agreement between daytime ABPM and different schedules with decreasing number of days for HBP recording in 70 treated hypertensive KTR.

Design and method: BP control defined by OBP < 140/90 and daytime ABPM or HBP < 135/85 mmHg was tested in 70 KTR (mean age 56 ± 11 y; mean graft survival 7 ± 6.6 y). OBP and HBP were measured with an Omron M6 and 24-h ABPM with a Spacelabs 90207. HBP was measured on consecutive days (2 times in morning and 2 times at evening/day), the first day was discarded for the mean calculation. Agreement on BP status between daytime and HBP was studied when HBP was measured during 7, 5 or 3 days.

Results: BP was uncontrolled in 50% of the KTR based on OBP, in 61 % according to daytime ABPM and even in 64 % with HBP. Sensitivity (Se) testing agreement between daytime ABPM and HBP decreased progressively when number of days of BP recordings was shortened: the highest Se was observed for a 7 days duration with 1st day discarded for mean calculation (86 %).
Specificity (Sp) fluctuated around 70 % and was the highest for a 5 (73 %) and 3 days schedule. However the 5 days schedule had higher Se (83 %) than the 3 days (76%). Proportions of KTR correctly classified according to daytime ABPM were 79 %, 79 % and 78 % with the 7, 5 or 3 days schedule, respectively.

Conclusions: HBP, easier and less restricting method than 24 h ABPM, is a good alternative to daytime ABPM as nearly 80 % of treated KTR were similarly classified by both techniques. HBP recording period can be shortened to 5 days according to Sensitivity and Specificity. A 3 days schedule appears more risky reducing the chance to identify masked HT due to a decreased drug adherence.

PP.01.15 ACCURACY OF HOME BLOOD PRESSURE MONITORING IN ARTERIAL HYPERTENSION DIAGNOSIS

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Objective: The arterial hypertension diagnosis is based on office blood pressure measurement, and current guidelines suggest the use of out-of-office blood pressure measurement techniques in specific cases, as suspected white-coat or masked hypertension. Home Blood Pressure Monitoring (HBPM) is recommended as a complementary method to Ambulatory Blood Pressure Monitoring (ABPM). However usually HBPM is only used for implementing blood pressure control in treated patients. We tried to identify the accuracy between HBPM and ABPM in untreated patients. (We tried to identify HBPM accuracy between to ABPM in untreated patients.)

Design and method: We enrolled 83 consecutive untreated patients who performed ABPM in our Hypertension Unit and completed a short HBPM schedule (two measurements, twice daily, for four days) between November 2011 and June 2015. Patients were instructed about HBPM in accord to current hypertension guidelines and they used validated automated arm devices. We compared the accuracy between the two techniques and the HBPM ability to identify arterial hypertension in comparison with ABPM.

Results: Pearson's correlation coefficient between HBPM 4-day average and daytime ABPM values was 0.59 for systolic blood pressure (SBP) and 0.77 for diastolic blood pressure (DBP). Bland-Altman analysis revealed a mean difference of –5.68 mmHg, SD 8.82 mmHg for SBP, and –4.64, SD 6.33 mmHg for DBP. ROC curves described AUC for SBP of 0.75 and for DBP of 0.877. The ABPM identify as hypertensive 54 subjects on 83 (65.1%), the HBPM 29 subjects (34.9%), p-value 0.01609.

Conclusions: HBPM has a moderate correlation and a moderate accuracy in the identification of arterial hypertension compared with ABPM. Although HBPM is recommended as alternative method respect to ABPM, in untreated patients it is not reliable for arterial hypertension diagnosis and probably it is not able to identify specific hypertension patterns, in contrast with current guidelines.

PP.01.16 CENTRAL BLOOD PRESSURE ASSESSMENT WITH A NEW OSCILLOMETRIC DEVICE TEL-O-GRAPH®

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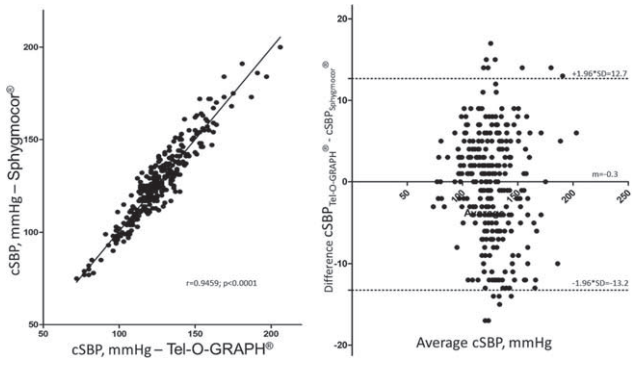
Objective: Central blood pressure (CBP) measurement might precise the individual cardiovascular risk of the patient. We sought to evaluate the accuracy of the CBP calculation with a new oscillometric device Tel-O-GRAPH® (I.E.M., Stolberg, Germany) in different common clinical situations.



Design and method: 103 subjects were prospectively included in the study. The performance accuracy of Tel-O-GRAPH® was assessed in comparison to Sphygmocor® (AtCor Medical, West Ryde, NSW, Australia) using Bland-Altman approach. The robustness of the values with Tel-O-GRAPH® was evaluated in supine and seated positions as well as for experienced and inexperienced user.

Results: Mean age of the study population was 60 ± 17.9 years. 56.6% were male and mean BMI was 26.5 ± 4.9 kg/sqm. The mean systolic CBP was 126.7 ± 21.9 mmHg measured with Tel-O-GRAPH® and 126.6 ± 22.5 mmHg measured with Sphygmocor®. Good agreement between Tel-O-GRAPH® and Sphygmocor® for CBP could be shown (mean –0.3 ± 6.7 mmHg; Person's r = 0.95; p < 0.0001). The mean difference of CBP with Tel-O-GRAPHâ was 1.5 ± 6.8 mmHg (r = 0.9; p < 0.0001) and –1.4 ± 5.0 (r = 0.97; p < 0.0001) mmHg between supine vs. seated position and between experienced vs. inexperienced user respectively.

Conclusions: Tel-O-GRAPHâ calculates CBP easy and quickly using "one button press" procedure. We observed a high CBP measurement accuracy compared to Sphygmocor®. Given stable brachial blood pressure measured CBP values seem to remain robust independently of body position or operator experience.

PP.01.17 BLOOD PRESSURE MEASUREMENTS IN NORMOTENSIVE PREGNANT WOMEN IN THE SITTING POSITION AND IN THE LEFT LATERAL POSITION: A CROSS-SECTIONAL STUDY

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Objective: Hypertensive disorders of pregnancy, such as gestational hypertension, preeclampsia, eclampsia, and essential hypertension are associated with maternal and perinatal mortality. Gestational hypertension, preeclampsia, and eclampsia occur when blood pressure reaches its threshold after 20 weeks of gestation, with the additional criteria of proteinuria for preeclampsia and of convulsive crisis for eclampsia. Blood pressure measurement, despite being the most useful technique for hypertension diagnosis, can lead to inadequate conclusions if essential technical standards are not followed. The purpose of this study was to compare the blood pressure of normotensive pregnant women during late pregnancy in both arms, in sitting position and left lateral positions.

Design and method: This is a cross-sectional study sampled 70 pregnant women averaging 25 years of age, during the antenatal care, and with gestational age between 28 to 39.5 weeks. The blood pressure was measured using mercury sphygmomanometer and in accordance with the 6th Brazilian Guidelines for Hypertension. Linear mixed-effects models were used to compare changes in systolic and diastolic blood pressure in different positions and arms.

Results: Systolic and diastolic blood pressure measured in the left lateral position were higher in the left arm than in the right arm (mean difference: 16.36 mmHg; 95% CI: 15.22, 17.50 and 24.57 mmHg; 95% CI: 23.24, 25.90, respectively). In the right arm the systolic and diastolic blood pressure measured were higher in the sitting position than in the left lateral position (mean difference: 14.90 mmHg; 95% CI: 13.76, 16.04 and 16.46 mmHg; 95% CI: 15.12, 17.79, respectively).