Long-Term Effects of Telemetric Blood Pressure Monitoring in Adequately Treated Patients with Arterial Hypertension

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Background and aim: Studies confirm that an optimized blood pressure (BP) adjustment, compared to a standard attended control-group, can be achieved with a 3-month interventional telemetric blood pressure measurement (iTBPM) in inadequately treated patients with arterial hypertension. This recent analysis should clarify if these effects lead to a better control in long term.

Methods: 57 patients with initially inadequately treated arterial hypertension were evaluated in the former intervention study concerning BP adjustment after 3 month of iTBPM (besides standard supply the iTBPM group was supported additively by a telemetry supply for the daily transfer of the measured BP values at home to the physician. In case of an insufficient BP-control or non-compliance, the physician was able to counteract for example in form of changing medication or intervention via phone). In conclusion an ABPM could be carried out with 18 (iTBPM) and 22 patients (controls) after a period of 617 and 576 days on average. Those patients were compared concerning ABPM-target values with the terminal data after the initial 3-month BP adjustment period.

Results: After a 3-month experimental period significantly more percent of those patients belonging to the iTBPM group achieved the asked target values than those ones belonging to the control group (iTBPM: 54%, controls: 36%; p=0.007). A similar distribution was also confirmed after 617 and 576 days, respectively (iTBPM: 56 %, controls: 40%; p=0.024).

Conclusion: iTBPM allows not only an optimized BP control during the initial 3-month BP adjustment in patients with inadequately treated arterial hypertension, it also allows a better adjustment of BP target values compared to standard supply in the long term. Interventional TBPM creates a long time effect by an optimized therapy adjustment in the titration period and on the other hand by an amelioration of patient compliance in the long term.