

ADVANTAGES AND LIMITATIONS OF USING THE AKTIIA CUFFLESS BRACELET FOR A HYPERTENSION SPECIALIST

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Méthods

The AKTIIA bracelet was the first cuffless blood pressure monitor available in Europe. While published medical data show the validity of the measurement system compared to traditional blood pressure measurements, the objective of this preliminary study was to assess the value of the AKTIIA bracelet in the care of treated hypertensive patients. Two bracelets have been provided by the manufacturer to a university cardiologist, specialist in hypertension. They were assigned to two hypertensive patients treated with antihypertensive drugs: one 62 years old treated with nebivolol 5 mg for 1 month and then with nebivolol 5 mg + candesartan 4 mg for the following 2 months, the other 52 years old treated with irbesartan 150 mg for 3 months. They were instructed to wear the bracelet for 3 consecutive months and following the manufacturer's instructions to perform a calibration on 3 occasions. The patients performed also home blood pressure monitoring for 3 days with 6 measures per day once a month while wearing the bracelet on the other arm. Over the same time periods, SYS/DIA values were accurately comparable between the AKTIIA bracelet and HBPM. The table shows Benefits and limitations of the AKTIIA cuffless bracelet for a hypertension specialist.

Results

Benefits	Limitations
Reliability of measurements	No measurements during a sport activity
Measurements during sleep	No measurements in the water environment
Quantification of blood pressure dipping	No measurements during finger/arm activity
Measurements over several days	Difficulties to perform calibration in the first test
Measurements over several weeks	No medical access to source data
Measurements over several months	No removal of outliers by the physician
Accurate quantification of the antihypertensive effect	No information on the treatment taken (with initial version)

Conclusions

The AKTIIA bracelet, the first cuffless blood pressure monitor available in Europe, is currently proposed for blood pressure monitoring in healthy subjects. Its technological properties make it possible to use it for the follow-up of patients treated for hypertension. Some evolutions are desirable to facilitate its use by hypertension specialists. The cuffless method which allows blood pressure measurements without disturbing sleep constitutes a breakthrough in the management of hypertensive patients.