Aktiia Accuracy Across Subgroups

AKTIIA OPTICAL BLOOD PRESSURE MONITOR ACCURATE ACROSS GENDER, AGE, BMI AND SKIN COLOR COMPARED TO INTRA-ARTERIAL MEASUREMENTS

> "For the overall population and most subgroups, the new optical technique appears to be capable of replacing more traditional methods of BP estimation.

STUDY SUMMARY

The purpose of this study was to compare the systolic (S) and diastolic (D) blood pressure (BP) estimations from a new optical device at the wrist (figure) against invasive measurements performed on patients scheduled for radial arterial catheterization. The first results from this study were recently published and demonstrated good agreement for the overall study population. Here we report expanded statistical analyses for different population subgroups such as gender, age, body mass index (BMI) and skin color. The study protocol consisted of the simultaneous recording of reflective photo–plethysmographic signals (PPG) from the optical device, and BP values recorded by a contralateral radial arterial catheter.

KEY FINDINGS

Table 1. SD of measured BP differences

	Population	N	SD of SBP differences (mmHg)	SD of DBP differences (mmHg)
	All	16	7.1	2.9
Gender	Male	10	6.4	2.8
	Female	6	8.0	3.1
Age (years)	<65	7	4.0	2.3
	>65	9	*9.3	3.4
BMI (kg/m^2)	<26	10	7.9	2.9
	>26	6	5.7	2.8
Skin Color (Fitzpatrick)	2	13	7.7	3.0
	3	3	4.5	2.6

*Only subgroup with a SD larger than 8mmHg.

TAKEAWAY

The aim of the present study was to compare SBP and OBP estimations from the OBPM technology developed by Aktiia during hemodynamic variations naturally occurring in the ICU. The obtained performances confirm the potential of Aktiia OBPM algorithms in estimating BP in a noninvasive and reliable manner.