

Forearm NIBP vs arterial line measurement in morbidly obese patients



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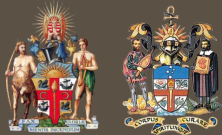


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INTRODUCTION



- A morbidly obese 43 year old lady with a BMI of 46 with controlled hypertension, presents for a hysteroscopy D&C for post menopausal bleeding.
- Arterial NIBP can be risky and difficult to perform in morbidly obese patients
- NIBP is problematic as most commercial cuffs do not fit the morbidly obese upper arm
- Forearm NIBP usually allows a fit of the cuff similar to a non obese upper arm



Methods



- Local ethics committee approval
- 50 patients, BMI over 35
- Elective surgery
- Art line and forearm NIBP, 5 minutely measurements
- Data collected real time (GE S/5 collect)
- Statistical analysis using “R”.

RESULTS

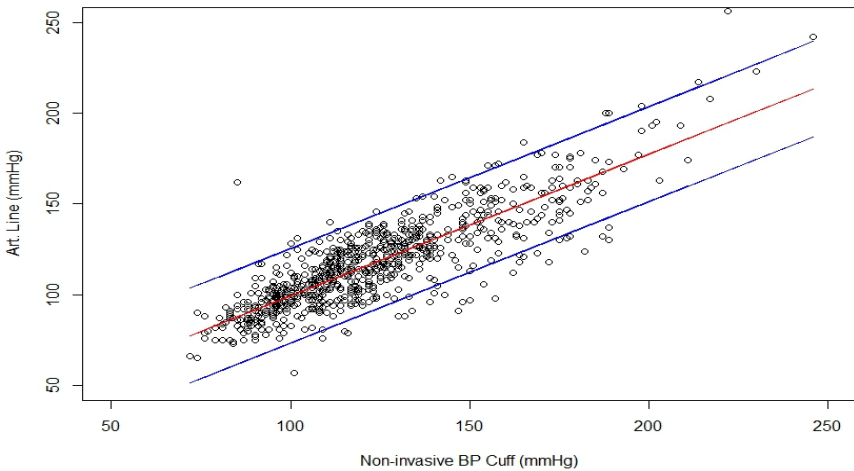


- 50 Patients, 816 data points
- Mean age 50.6 years (female 35, male 15)
- Mean BMI 44.9 (35-61)
- TOST NIBP v' s Arterial line (equivalence)
 - Systolic tolerance 10mmHg (p=0.05)
 - Mean 5mmHg
 - Diastolic 5mmHg
- Relationship consistent across range of BMI

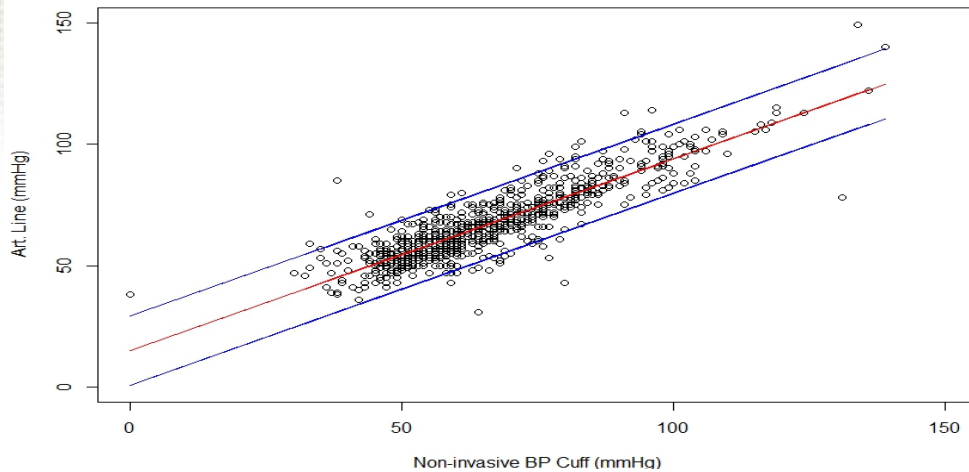


RESULTS

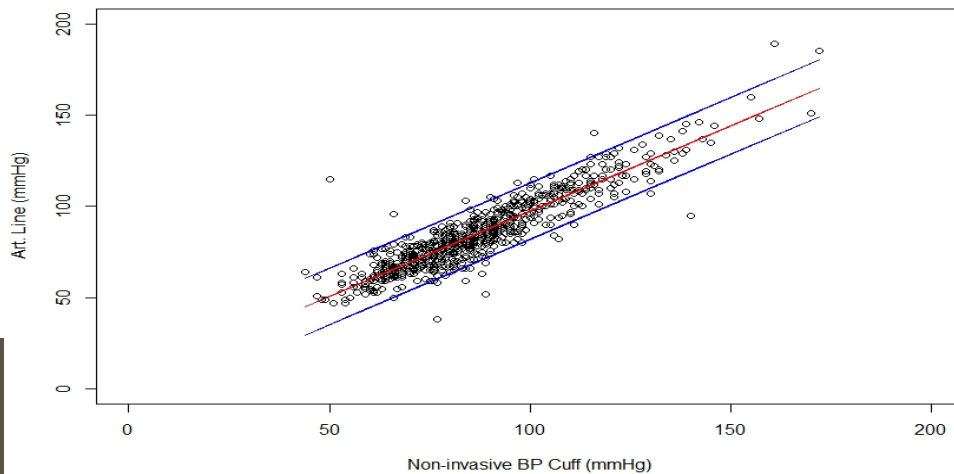
Systolic Blood Pressure



Diastolic Blood Pressure



Mean Blood Pressure



CONCLUSION



- Forearm noninvasive BP cuff usually fits well in obese patients.
- Within clinically relevant limits there is good agreement between Arterial line and NIBP readings.
- Where arterial line monitoring is not required for other clinical reasons, forearm NIBP monitoring is reliable in obese patients.
- Acknowledgements..

