Intraosseous pressure readings can be obtained in healthy human volunteers” Salzman et al (2017).

Abstract:

STUDY OBJECTIVE: Invasively monitoring blood pressure through the IO device has not been thoroughly demonstrated. This study attempted to establish baseline values of IO pressure in a healthy human population.

RESULTS: Fifteen subjects were enrolled between April and July 2015. Fourteen of 15 humeral IOs were placed successfully (93.3%) and all 15 of the tibial IOs were placed successfully.
Mean tibial systolic, diastolic, and mean IO pressure were 55.8 ± 27.9, 49.3 ± 27.1, and 48.4 ± 29.4 mm Hg, respectively. Humeral systolic, diastolic, and mean IO pressure were 32.9 ± 16.0, 27.4 ± 15.2, and 24.5 ± 14.3 mm Hg. The mean tibial IO pressure was 52.5% ± 32.0% of external cuff pressure ratio. The mean humeral IO pressure was 26.5% ± 15.2% of the external mean blood pressure. The Bland Altman plots showed an inconsistent relationship between the systolic and diastolic cuff pressure and the IO pressures. We observed a 1% per minute decrease in IO pressure from the initial placement until the final reading.

CONCLUSIONS: Intraosseous pressure readings can be obtained in healthy human volunteers. However, absolute IOP values were not consistent between subjects. Future research may determine how IO pressure can be used to guide therapy in ill and injured patients.

Reference:


Thank you to our partners for supporting IVTEAM