The purpose of this study was to compare a wearable microfluidic device (Gx Sweat Patch) and standard absorbent patch in measuring local sweating rate (LSR) and sweat chloride concentration ([Cl\(^{-}\)]) in elite basketball players. For ecological validity, the testing took place during live coach-led practices (98 ± 30 min).

**RESULTS**

There were no differences between the absorbent patch and microfluidic patch for LSR (Fig 1, p = 0.34) or local sweat [Cl\(^{-}\)] (Fig 2, p = 0.55).

There was no difference between measured and predicted WBSR (0.97 ± 0.41 L/hr vs. 0.89 ± 0.35 L/hr, p = 0.22; 95% limits of agreement = ± 0.61 L/hr) (Figure 3).

**CONCLUSION**

The Gx Sweat Patch and smartphone application algorithms provide similar LSR, local sweat [Cl\(^{-}\)], and WBSR results compared with the standard field-based methods in elite male basketball players, with or without tattooed skin, during typical moderate-intensity practice sessions that include a mix of noncontact drills and live high contact scrimmages.