The Effects of Kicking Leg Preference on the Bilateral Balance Ability Asymmetries in Collegian Football Players

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Abstract : The primary aim of the present study was to identify the bilateral balance asymmetries when comparing the dominant (DL) vs. the non-dominant leg (NDL) in the collegian soccer players. The secondary aim was to compare the interlimb asymmetry index (ASI) when differentiating by kicking preference (right-dominant vs. left-dominant). 34 right-dominant leg (RightDL) (age:21.12 \pm 1.85, height:174.50 \pm 5.18, weight:69.42 \pm 6.86) and 23 left-dominant leg (LeftDL), (age:21.70 \pm 2.03, height:176.2 \pm 6.27, weight:68.73 \pm 5.96) collegian football players were tested for bilateral static and dynamic balance. Balance ability was assessed by measuring centre of pressure deviation on a single leg. Single leg static and dynamic balance scores and inter-limb asymmetry index (ASI) were determined. Student t tests were used for the comparison of dominant and nondominant leg balance scores and RightDL and LeftDL football players' inter-limb asymmetry index of the balance scores. The results showed that there were significant differences in the dynamic balance scores in favour of the nondominant leg, (DL:738 \pm 211 vs. NDL:606 \pm 226, p < 0.01). Also, it has been seen that LeftDL players have significantly higher inter-limb asymmetry index when compared with rightDL players for both static (rightDL:-7.07 \pm 94.91 vs. leftDL:-183.19 \pm 354.05, p < 0.01) and dynamic (rightDL: 1.73 \pm 49.65 vs. leftDL:27.08 \pm 23.34, p < 0.05) balance scores. In conclusion, bilateral dynamic balance asymmetries may be affected using single leg predominantly in the mobilization workouts. Because of having higher inter-limb asymmetry index, left-dominant leg players may be screened and trained to minimize balance asymmetry.

Keywords: bilateral balance, asymmetries, dominant leg, leg preference

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