

MEETING ABSTRACT

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Limb dominance for fifth metatarsal fracture in football players is position-specific

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Fifth metatarsal fractures (5MtF) are one of the most common traumatic foot injuries in football player [1,2]. A previous study demonstrated that the 5MtF in football players occur frequently in their non-dominant limb [2]. Since different playing positions requires different physical demands in match-play [3], the aim of this study was to examine the hypothesis that the limb dominance for 5MtF is position-specific. Using a publicly-available injured reserve list in Japan professional football league (J-League) during 2008-2013 seasons, we collected a total of 82 cases of 5MtF. Positions (forward players: FW, midfielders: MF, and defenders: DF) and limb dominance in each player was also identified by officially-released profile in their team. To test whether the percentage of limb dominance of 5MtF differed from chance, we used a binomial test to compare reported incidence of 5MtF in non-dominant limb out of all cases to the theoretical probability of 50%. In the present study, 24 (29.3%), 33 (40.2%) and 25 (30.5%) cases of 82 cases were classified into FW, MF

and DF, respectively (Figure 1-A). There were no significant differences in the incidence of 5MtF among three groups ($p=0.41$, Chi-square test). Overall, the 5MtF tended to be occurred in non-dominant limb (Figure 1-B; $p<0.01$). However, as shown in Figure 1-B, the trend was more pronounced in DF ($p<0.01$), and not in FW ($p=0.15$) and MF ($p=0.24$). These results suggest that limb dominance for 5MtF is position-specific in football players.

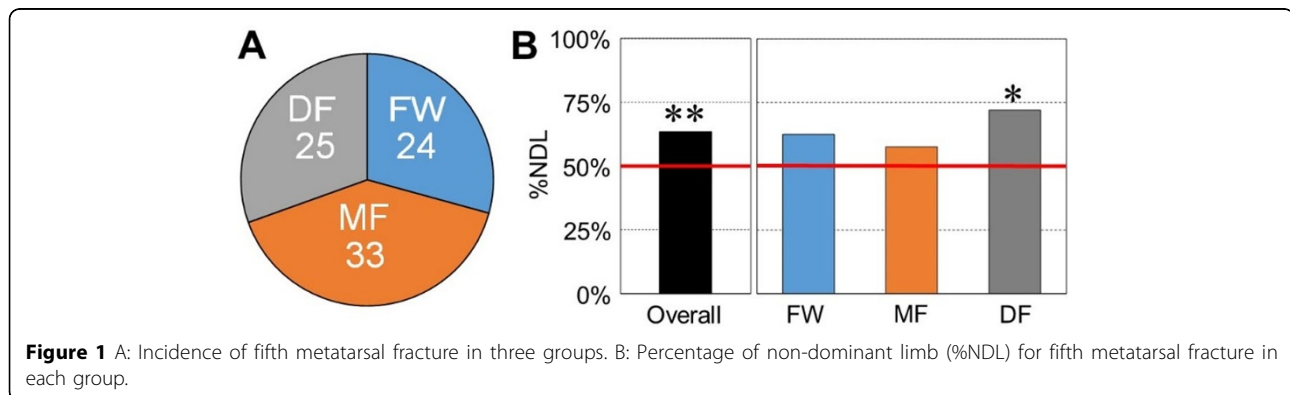
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