

RELATIONSHIP BETWEEN JAPANESE AND WELSH UNIVERSITY RUGBY UNION PLAYERS – POSTURAL SWAY OF CENTRE OF GRAVITY AGITATION

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Introduction

Rugby Union football (Rugby) involving contact play is the hardest ball game sport. It is very important to train players so that they maintain a good balance between physique and motor ability. Postural Center of Gravity Agitation (PCGA) is one of the methods for measuring upright capability. In addition, PCGA related to one's physical strength and the nervous system (P. Odenrick et al., 1984). We reported that a Japanese high school student who was selected by the All Japan Under 19-year-old Team measurement values for Length (LNG) and Environment Area(ENVA) in PCGA was lower than other players who played in the same position. The purpose of this study is to examine the measurement results of PCGA, comparing Welsh and Japanese university rugby union players.

Methods

Twenty-nine Japanese university students who had played at first XV of Division 1 in the western league and seventeen Welsh university students who had played at first XV of Division 1 in the Welsh national league were recorded the displacement of PCGA for 30 seconds at the frequency of 50Hz and calculated LNG, ENVA and Romberg rate (open eyes/close eyes) in PCGA, using a portable gravicorder (GS-11, ANIMA, Tokyo).

Results & Discussion

Table 1 shows measurement values for PCGA. The results indicated that Welsh rugby union players whose measurement values for LNG of close eyes and LNG of Romberg rate in PCGA were in fact lower than

	N	LNG of Close Eyes	LNG of Romberg Rate
JAPANESE	29	55.69 ± 19.2 *	1.50 ± 0.3 *
WELSH	17	44.50 ± 16.1 *	1.25 ± 0.3 *
			* p<0.05

Japanese rugby union players (p<0.05). It is conceivable that Welsh rugby union players would have excelled in terms of balance in the PCGA.

Conclusion

This study suggested that the measurement values of PCGA can be used an index for judging the performance ability of rugby union football players.

References

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