Results The dominant shoulder displayed significantly increased external rotation when compared with the non-dominant (120.92°±14.85 vs 106.78°±12.53). Internal rotation was decreased by 11.99° in the throwing shoulder (p = 0.047). Concerning forward elevation, a tendency for greater values was noted (p = 0.08), with a higher degree in the throwing arm. Conclusions Range of motion was different between shoulders. Our athletes had an increase in external rotation and a loss of internal rotation in the throwing shoulder, being concordant with what is described in other overhead sports. Furthermore, the dominant shoulder had a significant increase in forward elevation. These findings support the need of performing these evaluations to monitor the development of injuries, so that preventive measures can be taken.

Conclusions Elite wheelchair athletes have a high prevalence of MSK-U pathology with low-moderate levels of SS and PEF. MSK-U findings do not correlate with SS or PEF. These findings are an important step to educate the development of targeted preventative measures.