ABSTRACT

**Background:** Intrinsic factors including altered joint motion in the upper extremity may lead to altered biomechanics in tennis players and could result in symptoms of lateral elbow tendinopathy.

**Purpose:** To compare upper extremity passive motion and elbow carrying angle between three groups of women: recreational tennis players with LET, non-symptomatic recreational tennis players, and a control group of non-tennis players.

**Study Design:** Cross-sectional.

**Methods:** A convenience sample of 63 women was recruited and placed into one of the three groups: non-symptomatic tennis players (NSTP), symptomatic tennis players (STP), and a control group. Elbow carrying angle, passive range of motion of the shoulder, elbow, forearm, and wrist were measured during a single session.

**Results:** A significant difference was found between the groups for wrist flexion ($p < 0.00$), forearm pronation ($p = 0.002$), elbow flexion ($p = 0.020$) and extension ($p = 0.460$), as well as shoulder internal rotation ($p < 0.00$). No significant differences were found in other motions or carrying angle between the three groups ($p = 0.059$). Post-hoc comparisons indicated that shoulder internal rotation and wrist flexion was less in both STP and NSTP groups compared with the control group. Elbow flexion and forearm pronation were greater in STP than the other two groups.

**Conclusion:** Impairments including loss of shoulder internal rotation and wrist flexion and greater motion at the elbow and forearm were found in the UE of symptomatic tennis players. Evaluation of passive motion and muscle length should be performed prior to establishing a rehabilitation plan for symptomatic tennis players.

**Levels of Evidence:** 3

**Keywords:** lateral epicondylitis, tennis elbow, regional interdependency.