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Evaluation of the risk of patellofemoral pain syndrome and lower extremity biomechanics**Rasmi Muammer and Aygul Koseoglu***Yeditepe University, Turkey*

Background & Aim: Patellofemoral Pain Syndrome (PFPS) is one of the most common complaints in the knee of young's. The mechanism of PFPS may rise from abnormal muscular and biomechanical factors that alter tracking of the patella within the femoral trochlear notch contributing to increased patellofemoral contact pressures that result in pain and dysfunction. The aim of this study was evaluation of the risk of Patellofemoral Pain Syndrome (RPFPS) and lower extremity biomechanics.

Methodology: This study included 30 subjects, the case group consisted of 15 participants who suffered from bilateral RPFPS and the other 15 participants were classified as a control group. Kujala Scoring Questionnaire (KSQ), Lysholm Knee Scale (LKS) and Clarke's Test were applied to all participants. Hamstring muscle length, Iliotibial band tightness, static Quadriceps angle (Q-angle) and position of subtalar joint of the feet were evaluated.

Result: Significant differences were observed in the lower extremity biomechanical properties of the RPFPS group and control group ($P < 0.05$) in relation to KSQ, LKS values, hamstring muscle length, ITB tightness, foot pronation and Q-angle. The Clarke's test was found to be significant criterion between the two groups as a differential clinical test ($P < 0.001$).

Conclusion: Hamstring muscle shortness, Iliotibial band tightness, increased static Q-angle and excessive pronation of the foot are demonstrated as risk factors for patellofemoral pain.

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