

## Effect of Patellofemoral Alignment on Conservative Treatment Results

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### Summary:

This study shows that the functional outcome after a physical therapy program is not significantly influenced by the presence of PF malalignment.

### Abstract:

Purpose:

The purpose of this study was to evaluate if different treatment results are observed in patellofemoral pain (PFP) patients with normal and abnormal patellofemoral (PF) alignment.

Methods:

60 patients underwent an 8 week supervised physical therapy exercise program. Patellofemoral alignment was evaluated in all patients by CT scan with active quadriceps contraction. Malalignment was classified as: a) normal PF alignment (type 0); b) abnormal patellar glide without patellar tilt (type 1); c) normal glide but abnormal tilt (type 2); and d) abnormal tilt and glide (type 3) (Fulkerson & Shea 1990). The Kujala score was recorded as primary outcome measure after the 8 week training program, and at 3 months follow-up.

Results:

Of the 60 PFP patients, 24 were defined as type 0; 21 patients as type 1; 3 patients as type 2 ; and 12 as type 3. After 8 weeks of physical therapy the type 3 group displays a significant better Kujala score compared to the type 0 group ( $p=0.042$ ) and the type 1 group ( $p=0.047$ ). At three months post-treatment, no significant difference between the groups is observed. Statistical analysis reveals a significant improvement of the Kujala score in all three types of PF alignment ( $p<0.05$ ) after the 8 weeks of physical therapy and at 3 months follow-up.

Conclusions:

This study shows that the functional outcome after a physical therapy program is not significantly influenced by the presence of PF malalignment. The results of this study may convey the information that the influence PF malalignment on the subjective symptoms in PFP patients may not be overvalued. This trial provides evidence to support the use of a physical therapy regimen irrespective of the presence of patella malalignment.

Level of Evidence:

Level I High quality prospective study