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## **Effect of Extracorporeal Shock Wave Therapy for Consistent Knee Pain after Total Knee arthroplasty**

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### **Objective**

The aim of this study is to investigate the effect of Extracorporeal Shock Wave Therapy (ESWT) on severity of symptoms and physical functions in patient with consistent knee pain after Total Knee arthroplasty.

### **Subjects and Method**

This study was designed by single-blind and controlled study. All twenty patients who have consistent knee pain more than 1year after total knee arthroplasty were enrolled. The subject were classified into 2 groups by randomization. Group I was treated by conventional therapy and Group II was treated by conventional therapy and ESWT. Conventional therapy included medication or physical modalities. ESWT treatment (1000 shock wave, low energy level of 0.04 mJ/mm<sup>2</sup>) was performed once a week for 3 weeks. The shockwave probe was held stationary on a tenderness area around the knee or at the patellofemoral and tibiofemoral borders of the target knee, avoiding direct placement on the peroneal nerve or vessel. VAS (Visual analogue scale), WOMAC (Western Ontario and McMaster Universities arthritis Index), OKS (Oxford knee score) were used to evaluate severity of symptoms and physical functions. These scales measured before intervention, and at 4 weeks, 8 weeks later.

### **Results**

There are no significant differences in the baseline characteristics (Gender, Age, height, weight, duration) and initial severity of symptoms and physical functions between two groups. Significant improvements in VAS (Visual analogue scale), WOMAC (Western Ontario and McMaster Universities arthritis Index), OKS (Oxford knee score) were observed in the group II at 4 and 8 weeks later, when compared with Group I.

### **Conclusion**

In this study, ESWT showed significantly more improvement in pain and physical functional outcome. Generally consistent knee pain after the Total Knee arthroplasty patients hard to do re-operation and injection therapy such as hyaluronic acid injection for treatment. Therefore, ESWT can be another useful treatment option for them.