Summary

Introduction Osgood-Schlatter’s disease (OSD) is an inflammatory reaction due to mechanical overstrain mostly seen in adolescent athletes. Previous therapies consist of ice-application, non-steroidal anti-inflammatory drugs, load reduction, strengthening and stretching the knee’s surrounding muscles up to knee surgery [1-3]. Flossing is a modern treatment approach which is supposed to increase perfusion and metabolic activity, reduce pain, improve range of motion and myofascial shear motion by using a latex band tightened around extremities [4-5].

Method This case reports about a 14-year-old male soccer player complaining about knee pain (diagnosed OSD) for eight months on both sides. The player’s knees was treated three times a week (3 applications; tension 80-100% ventral, 40-60% dorsal) doing 10 squats and 10 lunges with the flossband. The observation was splitted into two parts (phase 1 (P1): 3 weeks, phase 2 (P2): 6 weeks).

The intervention in P1 was carried out at the left and in P2 at both knees. At baseline, intermediate and final measurement the maximum perceived pain in daily life using a visual analog scale (VAS), the maximum repetition of one-legged squats, the range of standing long jump from one leg onto both legs as well onto the same leg was measured. Furthermore, the temperature, the pressure-pain-threshold and the maximum pain value was recorded with an algometer at the pain and a reference point.

Results After P1 the player was painless in daily life and only felt a weak pressure (VAS≤0,6) after intensive exertion. The final measurements showed an increase of the one-legged squat at the left side from zero up to 23 repetitions and at the right leg an improvement of 50% (Figure 1A). The jump tests increased about 20% for the right and 21% for the left leg by landing on both legs as well as 11% for the right and 17% for the left leg by landing on the same one (Figure 1B). Furthermore, a clear increase of the pressure-pain-threshold and the maximum pain value was observed.

Conclusion Flossing presents a successful and promising treatment approach for OSD. Further studies are needed to support the measured results and confirm the assumed mechanisms of action.


