Management Example: Helping a child with hypermobility suffering with musculoskeletal pain.

Naomi is a four year old girl who was referred to the joint clinic by a paediatric consultant. Her parents were concerned that she had been complaining of back pain initially and then leg pain for the past year. Previously, her GP had referred her to the local physio team where a diagnosis of hypermobility had been made.

Naomi's main reports of soreness occurred at the end of the day or after period or standing and walking. She can walk for around 10 minutes before asking to be carried. She likes swimming and has started ballet. She was a little more cautious when playing on swings and slides or activities involving climbing. Her parents commented that Naomi often reported that her tummy ached. She also fidgets when sitting, which had been commented on in nursery reports.

After the initial discussion with Naomi and her parents to identify their main concerns and to understand what they hoped would be achieved for Naomi, a complete medical and social history was taken. Understanding how the pain impacts Naomi and her family is very important. Naomi's gait was assessed. Through watching her walk we could see that she had some difficulty in stabilising her core, that she had increased hip and knee flexion with her knee functioning from an internally placed position. Her feet showed increased pronation, on the upper limit expected for her age. The efficiency of her walking was reduced.

Joint examination showed hypermobility throughout the lower limb. Muscle strength sometimes difficult to formally assess at this age but Naomi was able to activate her muscles correctly but could not maintain the positions or needed to stabilise using other muscle groups. There was decreased strength in the main lower limb muscles, and some weakness in the hand muscles.

Naomi's main difficulties were considered to be related to muscle weakness such that she did not have enough strength or stamina to control her extra-flexible joints. A plan was formed with her parents to address the strength of the main leg muscles initially, to give her a stable support to function on, with a plan to add in further exercises for the core once the support was achieved. Four key exercises were chosen that were appropriate for her age. These were practiced in the clinic, and goals for progression were set. A physio follow-up was planned for six weeks. Footwear was discussed to identify supportive types to consider and orthoses were chosen to create a good foot-leg alignment. A podiatry follow up was planned for six months' time.

At the physio follow-up at six weeks, the leg aching had reduced and walking distance had increased a little. The back ache was still occurring although the parents felt it was beginning to improve. The muscle strengthening programme was being undertaken well so the physio changed the technique for one exercise and added in the use of leg weights to progress the programme further. Naomi was wearing trainers regularly and the orthoses were comfortable.

A further physio review was planned and carried out at 12 weeks after the initial appointment. At this review the leg aching was rarely occurring but the back ache still occurred after busy days but was not limiting Naomi. Her overall activity levels and confidence in activities had increased. Assessment showed her muscle strength in the main leg groups was much improved. The exercise programme was therefore adapted to reduce the leg exercises and to work on the back, core and hands.

At the next view, the podiatrist and physio reviewed together. The orthoses had been found useful and there family noted that Naomi would complain of leg ache on the few occasions that she did not wear them when out for a day. The orthoses were planned to be continued for a further year and then removed if muscle strength was full and aching was minimal. The back ache had reduced considerably and occurred only rarely. In order to improve fitness and strength further, Naomi had started gymnastics and was due to start school. Her fidgeting when at the dinner table was much improved although she did continue to sit on her legs or in strange positions. Strategies to address this were discussed and a review once school had started was planned with the physio to address any concerns if they arose. The muscle strengthening programme was reduced to two exercises only and a review for 1 year was planned. Supportive footwear for school was discussed and potential shops to seek out were recommended.

The family reported they were very pleased with Naomi's progress. Their hard work in keeping up the muscle strengthening programme was recognised and they were confident in keeping Naomi strong and were more informed about the many ways that hypermobility can affect the growing child.

Although we would expect some aching to occur in subsequent years, particularly when growth is rapid, new activities are undertaken or even following times of being poorly, our aim was to provide the parents with the knowledge and tools to be able to keep their daughter full active and to be able to reach her physical potential.