DIGITSOLE® PRO

Case Study

Diagnosis and treatment of a patient with Osgood Schlatter disease Digitsole Pro.

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The practitioner

Fabrice Millet has been a sport podiatrist since 2003, specialising in running and cycling, and is an instructor in the Sport Podiatry D.U. in Lyon.

He has a highly varied patient clientele, including athletes and ranging from children to the elderly. In an ad hoc manner, he uses a pressure platform as well as a video device to analyse running for athletes.

Since November 2019, Fabrice Millet has used DigitsolePro for all of his podiatry consultations, which allows him to detect problems with mobility in both walking and running, and to obtain a better evaluation of his patients by measuring objective biomechanical data that cannot be observed with the naked eye.

Patient information & reason for the consultation

The patient is a 12-year-old young man who practices tennis 5 times per week in training and competition

His parents made an appointment because he has been complaining for weeks of pain in the front of his left knee. The pain is more and more intense,

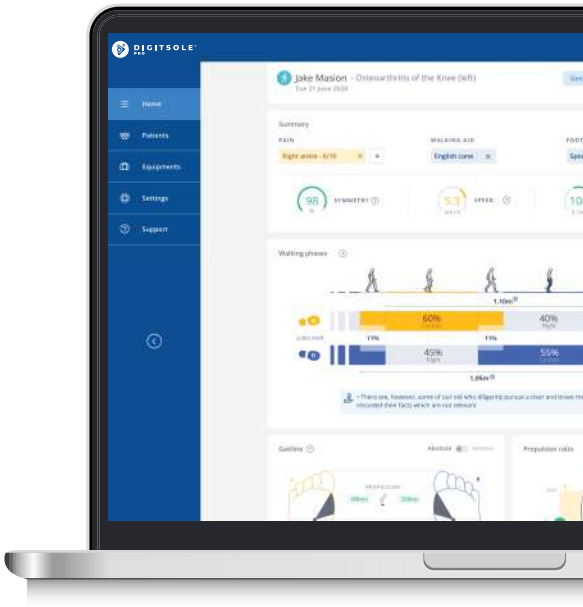
inhibiting him when he practices sports and bothering him when walking.

How is DigitsolePro used in the practitioner's daily activity?

Fabrice Millet uses DigitsolePro® for the dynamic analysis (walking or running depending on the patient).
He collects data on the patient's walking or running activity using the web interface available online at https://app.DigitsolePro.com.

The results are then presented to the patient, allowing the patient to integrate them into the treatment process and facilitating acceptance.

Does the practitioner use other movement analysis systems?
Fabrice Millet uses a camera to analyse the activity of athletes and movement analysis software in 2 dimensions of movement.



What are the most frequently used parameters and how are they used?

The sport podiatrist analyses the gait line, the swing phase, and the ankle roll (absolute)

The Gaitline

provides a **quick overall view of the walk** and shows what abnormalities may be detected. The contact times are indicated by step phase, allowing one to visualise a potential difference between the two sides and monitor the evolution.

The swing phase

is used to determine **propulsion ratio** and the muscles that create the propulsion. In this way, the symmetry between the two legs can be verified.
The swing phase is also used to analyse the length of the stride and the similarity between the two sides. These data help in advising patients regarding daily exercises to avoid asymmetry (strength training, proprioceptivity, etc.).

The ankle roll

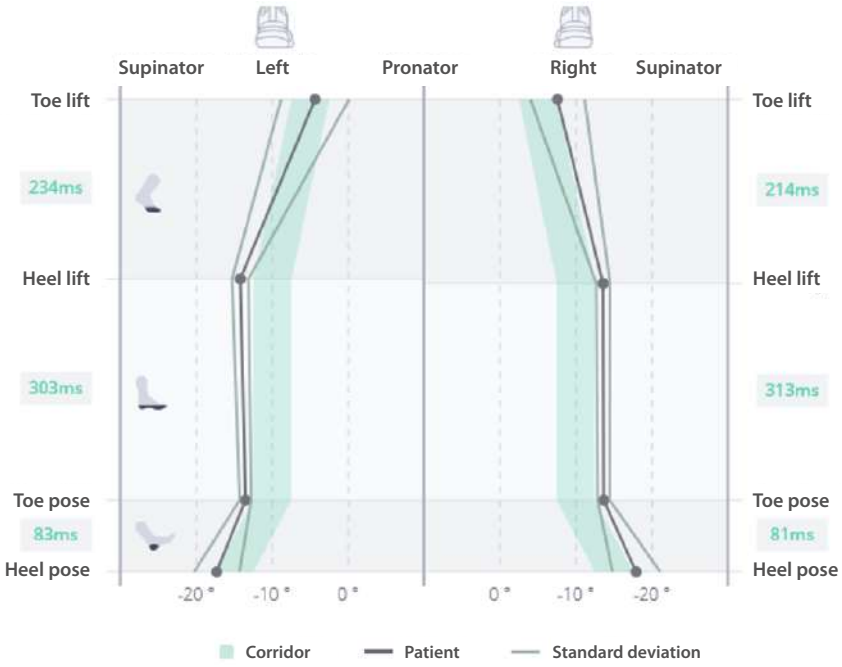
allows for the visualisation **angles when striking, flat footed, and during propulsion** in specify corrections.
The illustrative graphic is explained to patients, who can see their deformations and the differences between the two sides.

For this patient, what information was collected using DigitsolePro?

The walking profile verifies whether there is shortening, either of the duration of contact time or of the length of the stride.

In this case, the stride lengths are equal and the contact times are very close, which shows us that the pain is currently well managed or well treated.

These parameters also make it possible to assess the patient's pain.



The ankle roll is used to obtain the precise angles of deformation.

Based on these precise data, a corrective addition on the exterior of the foot will be placed in order to avoid slight supination of the midfoot, increasing the tension on the patellar tendon and the anterior tibial tuberosity.

What examinations were carried out in order to complete the DigitsolePro analysis? What information was obtained?

Fabrice Millet carried out his examinations in a conventional manner: questioning and examination while seated on a chair, examination standing and on one foot. marche.

• During the questioning, we learn that the patient practices tennis regularly and participates in tournaments.

He also does physical education offered at his school. He has complained for several weeks of pain in the front of his left knee, the pain progressively preventing him from practicing sports and bothering him when walking.

• The palpation of the anterior tibial tuberosity is painful to the touch and slightly swollen.

• In a stationary exam, he has very few deformations and the calcaneus is centred, as is the midfoot.

• When standing on one foot with the knee bend, he is unstable on both sides with a tendency to auto correct in supination. Bending causes pain

• When walking, we observe a gait in slight supination.

What diagnosis was given?

Osgood-Schlatter disease is a growth disease that occurs in young adolescents who play sports that include frequent running and jumping.

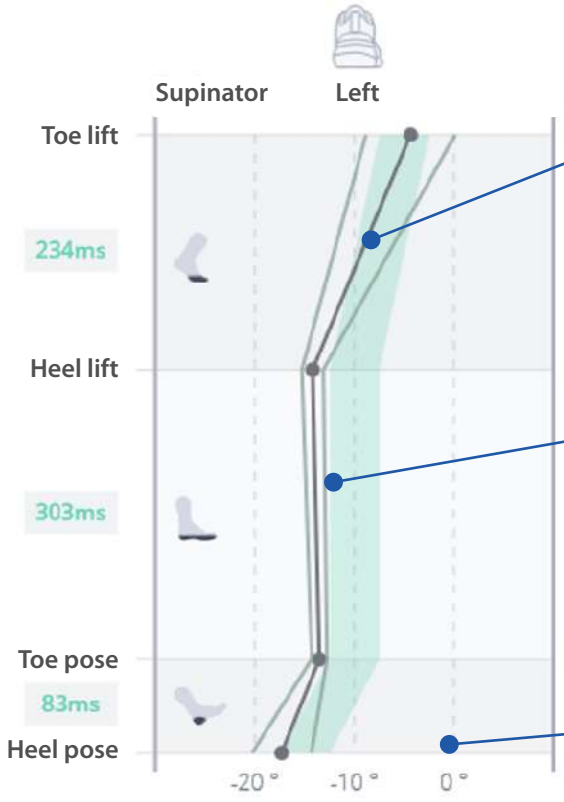
The supination observed when walking causes an accentuation of the tension on the patellar tendon.

What treatment or solution was provided to the patient?

Since pain is essentially the most important indicator, the practitioner must advise whether or not to stop playing sports based on how bad the pain is.

This young patient was advised to stop playing sports in light of different examinations, and stretching work was recommended for when the pain has disappeared.

Orthopaedic soles were made, intended to absorb the maximum amount of shock, and reposition and centre the knee, so that the constraints on the patellar tendon are decreased.



Under and over from 1 to give support to the first leg.

An arch support to support the plantar arch and increase the support surface, and an external piece (sub-styloid) will be added to correct the slight supination

Noene insert to decrease the shock

Digitsole Pro, an international Establishment

ISO 27001 : 2017

International standard for information security. It's a requirement for establishing, implementing, maintaining and continually improving an information security management system (ISMS) –We make the information assets we hold more secure.

ISO 13485 : 2016

Regulatory requirements are increasingly stringent throughout every step of a product's life cycle, including service and delivery. Increasingly, organizations in the industry are expected to demonstrate their quality management processes and ensure best practice in everything they do. This internationally agreed standard sets out the requirements for a quality management system specific to the medical devices industry.

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