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# Novel Physiotherapies, Physical Rehabilitation and Sports Medicine

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## Distortions Syndrome of Ankle Joint and Knee. Causes. Clinic. Physiotherapy

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**Introduction:** Deformations of the feet in children and feet pain syndromes in adults can be connected with deformities such as: Plano – valgus foot deformity, congenital or neurological deformations of feet in children with Minimal Brain Dysfunctions (MBD), Köhler's disease among girls using improper shoes, insufficiency and pain of frontal part of the feet connected with limited flexion of the toes, problems of hallux valgus deformity. Since 2012 (T. Karski, J. Karski) in some patients a new problem of the foot – namely 'the insufficiency and pain syndrome of ankle joint' and of knee joint has been observed. It has been found that this “new pain syndrome” relates to the way of getting out the car.

**Material:** In the period of 16 years 32 patients (n=32) with chronic insufficiency caused by the distortion of the ankle joint leading to limitation of dorsal flexion of the foot and pain syndrome have been treated. Additionally, many patients (circa 50) suffering from knee and hip pain originating in the way they were getting out of their small cars have been treated. This pathology is seen in the left knee joint, left ankle joint of car drivers or in the right knee and ankle joints of passengers in countries with right-sided traffic. In countries with the left-sided traffic these symptoms concern the opposite legs and joints. This new medical problem has not been described until now. Until recently, it has been interpreted as a walking difficulty, the pain in the knee and/or ankle joint and the swelling of the soft tissues of the foot mostly as a peripheral vascular disease. Feet problems in childhood and adulthood

The following problems can be observed: 1/ flat foot deformation in children and teenagers, 2/ limited plantar flexion of the toes, in adults detected by flexion toe test (Literature), 3/ bunion (halluces valgi) very frequent among women, 4/ foot insufficiency in Köhler's disease, 5/ hereditary and neurogenic disorders of the foot in children and in adults – pes valgus or pes planus – valgus residuals. 6/ since 2012 an additional problem of ankle joint has also been observed, namely the insufficiency connected with the improper way of getting out of the car. A syndrome present among drivers of small cars have been described and these problems refer mainly to the limited movement of dorsal flexion of the foot, pain, swelling, gait restriction. The cause of these clinical symptoms lies in the permanent distortion of the ankle joint. While getting out of the car, the left leg is placed on the ground as first (left in Poland) which causes the rotation movement of the whole body, distorts the ankle joint, knee joint and the hip, if there was a primary limited rotation movement in this hip. Clinical examination has proved a loosening of the ankle joint, swelling of the soft tissues especially in Achilles tendon region and in sinus tarsi.

**Knee:** The problem appears while getting out of the car onto one leg – the left in the case of the driver and the right in the case of the passenger (in countries with left-sided traffic it is the opposite). On examination, instability caused by loosening of lateral and medial ligaments or/and and the cruciate ligament were observed. In the case of co-existence of the additional varus or valgus deformity and in result - instability, this problem is particularly serious. Prophylactics and treatment The patients have been informed about the need to avoid rotation movement while getting out of the car and while performing other daily activities involving similar rotation movement of the body. Getting out of the car onto both legs and both feet was recommended as prophylaxis and therapy. What is more, the

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importance of exercises such as extension isometric exercises for knee, for m. quadriceps as well dorsal and plantar flexion of the foot was stressed. Additionally, the highly beneficial role of laser, diadynamic, ionoph(f)oresis, and local criotherapy were suggested. The significance of prophylactics among all drivers all around the world was / is highlighted

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**Notes:**