Biomechanical Etiology of the So-Called Idiopathic Scoliosis. Connection with “Syndrome of Contractures and Deformities”. Gait and standing ‘at ease’ on the right leg in development of spine deformity. New classification. New treatment and causal prophylactics

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Introduction: The biomechanical aetiology of the so-called idiopathic scoliosis [adolescent idiopathic scoliosis (AIS)] was the subject of author research from 1984. First observations during the scholarship in Invalid Foundation Hospital in Helsinki. Next follow the observations in Poland from 1984/1995 to 2007/2018. The result of research were presented from 1995 to 2017 in many Congresses and Symposia in Poland and abroad. First publication was in Germany in 1996 – in Orthopädische Praxis.

Material: In 2017 the whole material gathered 2500 cases. Age of patients 2 to 60 years old. Control group 505 persons. History of observations about aetiology of scoliosis. 1995 – fist lecture about biomechanical aetiology of the so-called idiopathic scoliosis in Szeged, Hungary.


1997 – was given the observations that the scoliosis children have the habit to stand ‘at ease’ only on the right leg.

2001 – describing of 1st and 2nd group and types of scoliosis

2004 – describing of 3rd group of scoliosis.

2006 – finished of the observation about “the model of hips movements and type of scoliosis”.


(1) “S” I etiopathological (epg) scoliosis. Double curves. Gibbous of the right side. Influence: “gait” and permanent “standing at ease on the right leg”. Stiff spine. 3D. Progression.

(2) “S” II/A epg scoliosis. Influence: permanent “standing at ease on the right leg”. One curve. Flexible spine. 1D. No or slight progression.

(2B) “S” II/B epg scoliosis. Influence: permanent “standing at ease on the right leg”, plus - laxity of joints or/and incorrect exercises in previous treatment. Flexible spine. 2D or mix. Moderate progression.


Physiotherapy: All previous extensions, its mean “muscles strengthening exercises” were incorrect and harmful, caused only bigger curves, bigger rib hump and more stiff spine. All stretching exercises for spine and hips are proper for treatment and for prophylaxis. Very important are: karate, taekwondo, aikido and standing ‘at ease’ on the left leg.

Conclusions: (1) The aetiology of the so-called idiopathic scoliosis is strict biomechanical. (2) There are three groups and four
types of scoliosis – connection with “standing” and with “gait”. (3) In therapy and in causal prophylaxis are important - the stretching exercises for hips, pelvis and spine introduced very early – in 3 – 5 years of children's life.


Biography
Tomasz Karski studied at Medical University in Lublin and received medical doctor certificate in 1961. During the studies he was active for three years in Students Scientific Orthopaedic Association and later after graduation he was the Assistant Teacher for young student generation. In 1967 and next in 1971 he passed specializations degrees - first and second degree in Orthopaedic Surgery and Traumatology of movement apparatus. In 1972 he received the doctor degree and in 1982 after habilitation (colloquium before Medical University Council) he passed consecutive degrees to receive phd degree and later became Assistant Professor. In 1993 he was awarded by full professor degree and title by President of Poland. Since 1st October 1995 to 2009 he was the Head of Chair and Department of Paediatric Orthopaedics and Rehabilitation of Medical University in Lublin/Poland, in the biggest Paediatric Hospital in Eastern Poland Region.

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