

Disorders of Newborns, Babies, Children and Adults – Problems of Hips, Knees, Shanks, Feet, Spine. Rules of Prophylaxis – Nursing and Care - In Points

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ABSTRACT

It is important to diagnose the abnormalities in newborns, babies and small children and treat them early. It is essential for proper functioning of the locomotor system in every period of life - in adults is the condition of good functioning in everyday situations over the years - in sports and at work.

Keywords

Syndrome of Contractures and Deformities (SofCD), Minimal Brain Dysfunction (MBD), Hips, Knees, Feet, Spine, Rules of prophylaxis.

Introduction

Many deformations and pain syndromes in adults begin to form in the childhood. The word “orthopedics” comes from two Greek words “*orthos*” and “*paidion*”. The word “*orthos*” means – correct, healthy, shapely. The word “*paidion*” means “child”. Well – “orthopedics” – means “healthy child”. This term “*Orthopédie*” was taken from Nicolas Andry de Boisregard’s (Paris 1741).

As Professor Stanislaw Piatkowski, founder of University Orthopedics and Traumatology Department in Lublin (1954), my teacher of orthopedics since my assistant duty in 1961, emphasized, prophylaxis in orthopedics should be an important aim of all specialists in this profession. He repeated in all lectures that important are:

- 1/ proper diagnosis,
- 2/ easy conservative therapy - understandable for patients
- 3/ surgery - if conservative therapy impossible,
- 4/ in all cases – important prophylaxis.

Proper therapy of children means good health for adults. Therefore, we can conclude that successful and complete therapy of children

means prophylaxis of locomotor system function in adults (Figures 1 - 21) [1-40].

Two main causes and three group of orthopedic abnormalities and disorders in children. Some information about adults. Presentation in points [A] [B] [C] [D]

[A] First group of disorders. Incorrect position, incorrect anatomy - shape and asymmetry of movements of joints connected with “*Syndrome of Contracture and Deformities*” (Professor Hans Mau, 1960 – 1980, Germany and Lublin observations, T. Karski 1973 –2006 / 2024) can be observed as early as in newborns. In the original description of the syndrome, Prof. Hans Mau used the words “seven asymmetrical points in child’s body” – in German “*Siebener Syndrom*” – in English “*Syndrome of Seven Asymmetries or Deformities*”. This includes changes in the position of head, neck, two various in spine – in saggital and in frontal axis, in hips, in position of pelvis, in feet. In Lublin in 2006 (T. Karski, J. Karski) we added the eighth deformity – “varus deformity of shanks”.

All these “changes” develop in utero due to oligohydramnios, inconvenient build of mother’s abdomen or pelvis or fetal bigger as usually – length and weight.

If these asymmetries are not cured early, problems of locomotor system functioning appear later on (Figures 1 – 13).



Figure 1: Symptoms of the “Syndrome of Contractures and Deformities” (SofCD) according to Prof. H. Mau and Lublin observations. Causes – insufficient space (A) in the uterus, (B) proper space. Asymmetries of the spine, hips, knees, shanks, feet – in position and in movement (C) (D) (E) (F). Smaller abduction of the left hip – dysplasia. Smaller adduction in „extension position” of the right hip - important in the etiology of scoliosis. Publications: T. Karski - USA, Canada, UK, India, Czech Republic.



Figure 2: Two-month-old child. “Syndrome of Contractures and Deformities”. 1/ Plagiocephalia. 2/ Torticollis sinister. 3/ Infantile scoliosis. 3/ Restricted abduction of left hip. 4/ Restricted adduction of the right hip. 4/ Varus of shanks.

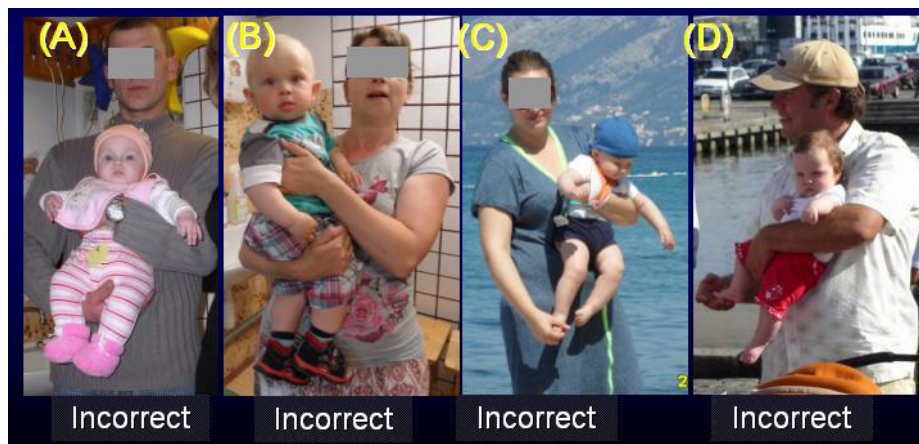


Figure 3: Wrong way of carrying a child - no abduction of the hips. Danger of development of dysplasia. Such carrying is recommended by „poorly” educated or “over – educated” doctors in many countries in Europe. Pictures taken in Poland (A & B) and abroad (C & D). Hips need abduction and flexion one or more years for proper development – deep acetabulum and horizontal concave roof.

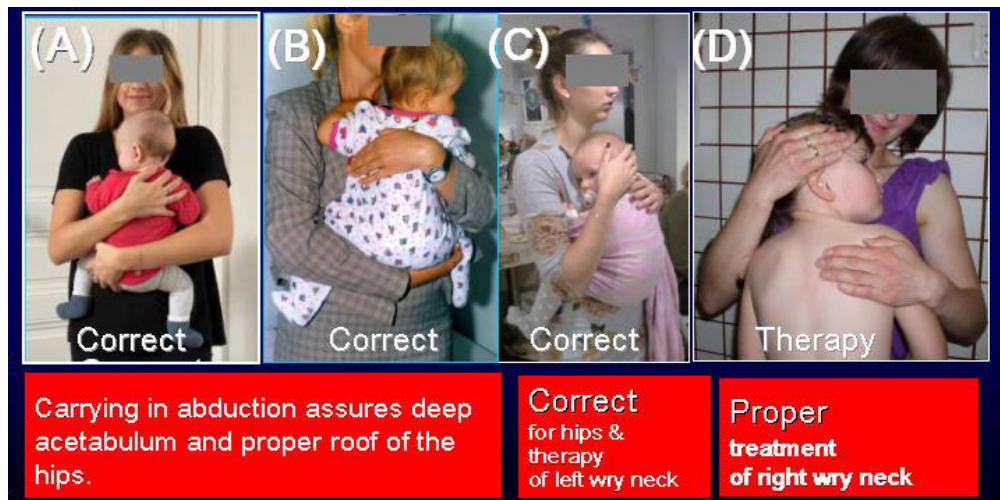


Figure 4: The correct way of carrying a child. Prophylaxis of the hips dysplasia (A) (B) (C). Proper therapy of the wry neck / torticollis – in (C) on the left side and in (D) on the right side. Permanent rotation stretching of the head - of m. sterno-cleido-mastoideus - to the wry neck side is the only proper method of therapy. Articles about this treatment in Germany and in USA T. Karski 1991 & 2017, 2020).

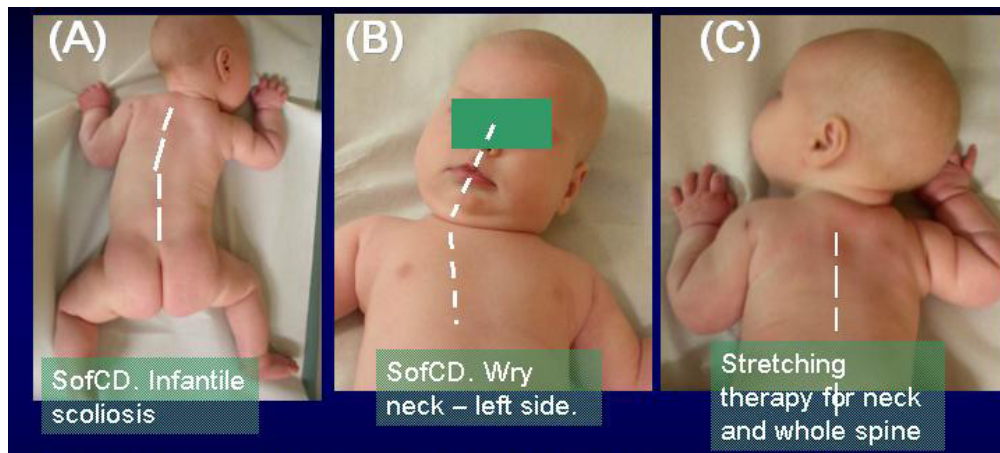


Figure 5: Syndrome of contractures and deformities according to Prof. Hans Mau. Asymmetries of head, neck (A) (B), trunk & spine, hips, pelvis. Cause: insufficient space in the uterus. Therapy - correct nursing of newborns & babies. The treatment of torticollis [wry neck] left side on the picture (B) through a rotation stretching (C) of sterno-cleido-mastoid muscle to left side.



Figure 6: Three-year-old child. Stretching-rotation treatment to the left side for left sided wry neck is successful even for older children. At this age a successful therapy takes longer, even 2 - 3 years, if stretching lasts for 1 - 2 hours every day.

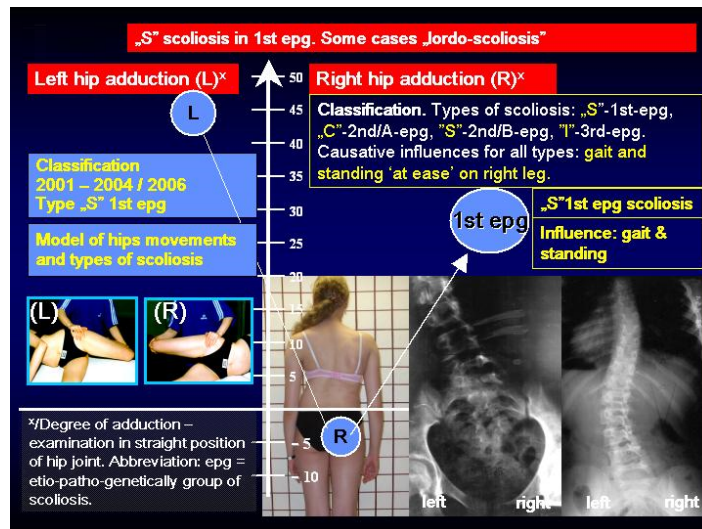


Figure 7: “S” scoliosis in 1st epg. Some cases “lordo-scoliosis” Influence: gait & standing.

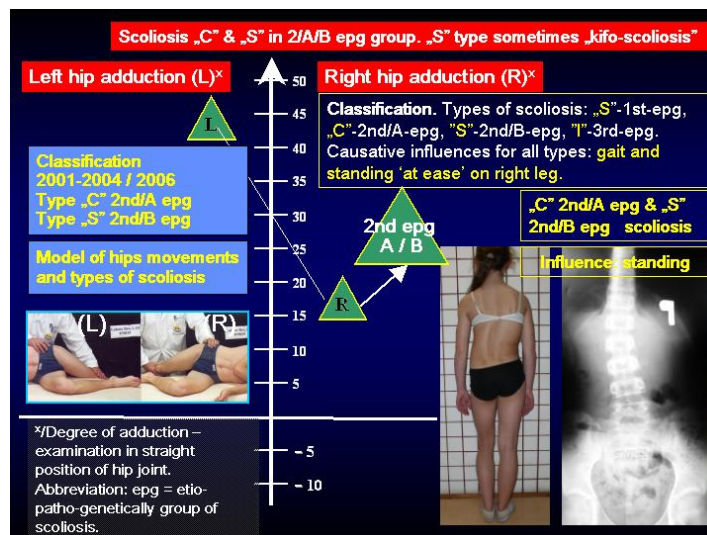


Figure 8: Scoliosis “C” & “S” in 2/A/B epg group. “S” type sometimes “kifo-scoliosis”. Influence: standing ‘at ease’ on the right leg.

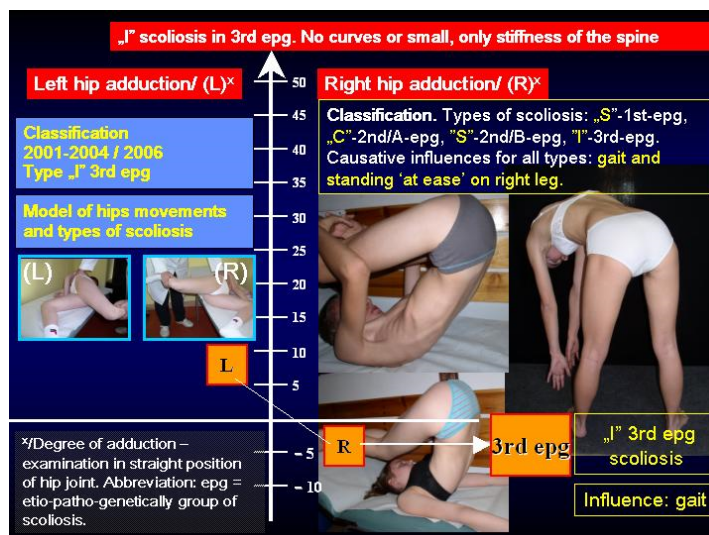


Figure 9: “I” scoliosis in 3rd epg. No curves or small, only stiffness of the spine. Influence: gait.



Figure 10: Example of wrong and harmful therapy in scoliosis (A) (B) (C). After such incorrect exercises plus corset in (D) - iatrogenic deformity, big curves, stiff spine, big rib hump, impossible to practice sports, pain.

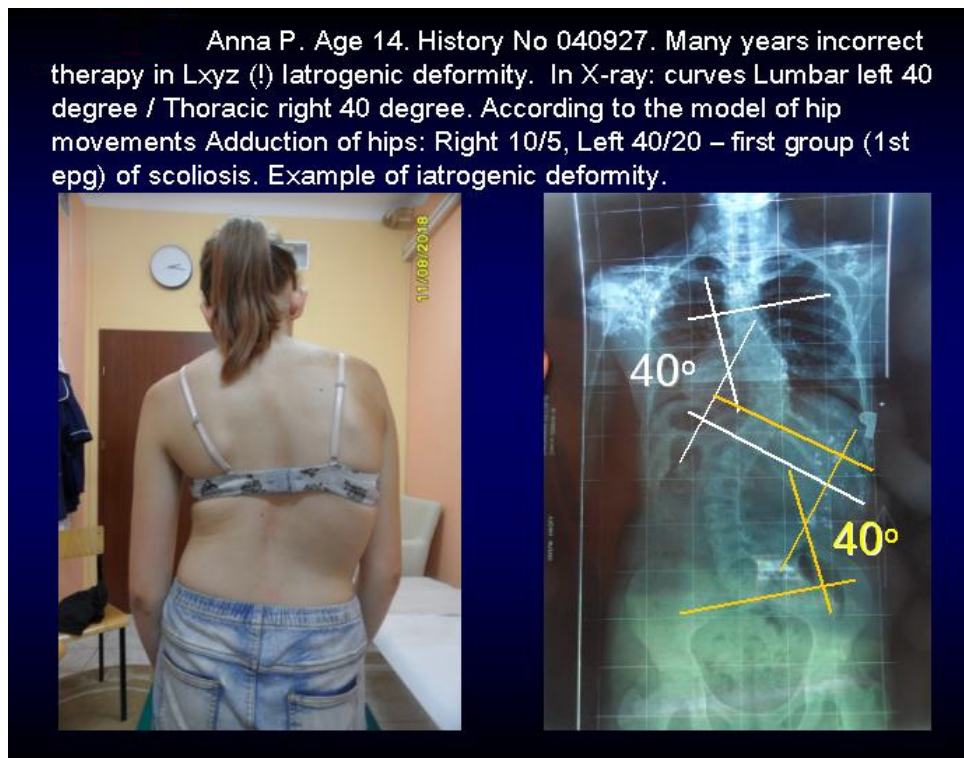


Figure 11: Anna P. Age 14. History No 040927. Many years incorrect therapy in Lxyz (!) Iatrogenic deformity. In X-ray: curves Lumbar left 40 degree / Thoracic right 40 degree. According to the model of hip movements Adduction of hips: Right 10/5 Left 40/20 – first group (1st epg) of scoliosis. Example of iatrogenic deformity.



Figure 12: Stretching exercises proper for scoliosis. Prof. S. Malawski from Warsaw was the first who recommended flexion exercises. Important standing only on the left leg & karate, taekwondo, aikido, kung fu, yoga.



Figure 13: 18 months old. Varus deformity in form of Blount Disease (A). In the picture (B) after three (3) month of therapy – „no standing” and „no walking” – its mean - excluding the Hueter - Volkmann law plus vit. D – better axis of legs.

[B]. The second group of abnormalities in newborns and babies is connected with perinatal asphyxia.

What are its causes? - Maternal hypertension or hypotension of blood circulation, anemia, illnesses, stress, even upsetting noise, long and difficult labor, nuchal cord, newborn jaundice – bigger than usually. In all these situations symptoms of Minimal Brain Dysfunctions (MBD), in some cases even Cerebral Palsy (CP), can appear. At children with MBD - we can frequently observe improper hip movements - limited abduction, wrong position of pelvis and spine, limited dorsal flexion of feet and improper,

limited, movement of other joints. All these disorders must be treated in early childhood. If not treated, they lead to movement apparatus impairments and pain in adults (Figures 14 – 21).-

[C] Joint laxity - The clinical third group of disorders connected with Minimal Brain Dysfunction (MBD).

This incorrect condition concerns all joints, however, hips, knees, feet as well as spine are especially endangered. In Poland, but also in other countries there is a common opinion, that-laxity is caused by “low muscular tension”. No – it is a mistake of thinking

and mistake of diagnosis. It is actually the contrary - in MBD the muscles are spastic or sub-spastic. The laxity is as result of changes in the properties of collagen – and this - result of „asphyxia”. This knowledge is important – because laxity can lead to the wrong body development in children and later can facilitate joint distortion and other symptoms, or overstress in physical activity. Joint laxity is frequently the origin of pain syndromes (Figures 14 – 16).

[D] Rules of prophylaxis for adults

Many disorders start to develop in the childhood. In therapy and prophylaxis of children – the aim / task is directed not only to doctors, physiotherapists but also to parents. What is more, some disorders and pain syndromes in adults can be cured by simple methods – and this paper is an occasion to present them. In the article we give some simple recommendations for prophylaxis of disorders of spine, hips, knees and feet of adults (Figures 17 – 21).

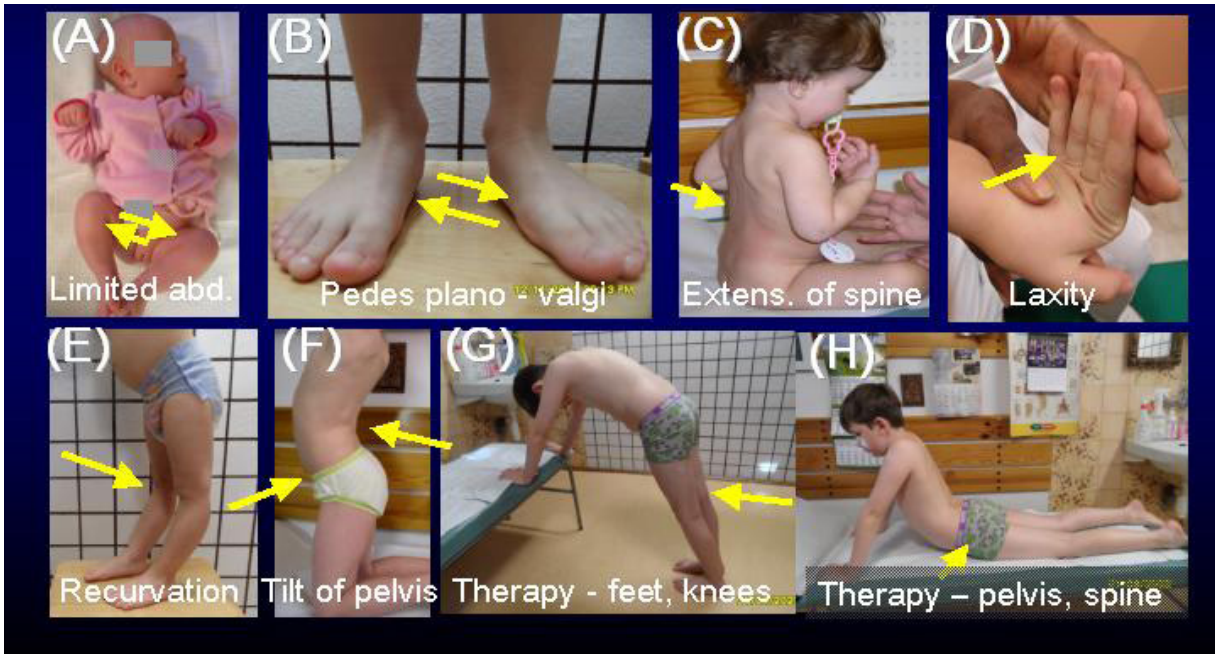


Figure 14: Minimal Brain Dysfunction (MBD). Sub-spasticity of muscles. (A) Limited abduction of the hips, (B) Pedes plano-valgi, (C) Extension contracture of the spine, (D) Changed collagen - in effect laxity of the joints. (E) Knees recurvation, (F) Anterior tilt of the pelvis & hyperlordosis of the lumbar spine. (C) (D) (F) – easy scoliosis development. Similar opinion Prof. M. Roth-1923, Prof. D. Tylman & Prof. K. Rapala-1960-1980. (G) & (H) Therapy. Articles: USA, Canada, Czech Republic.

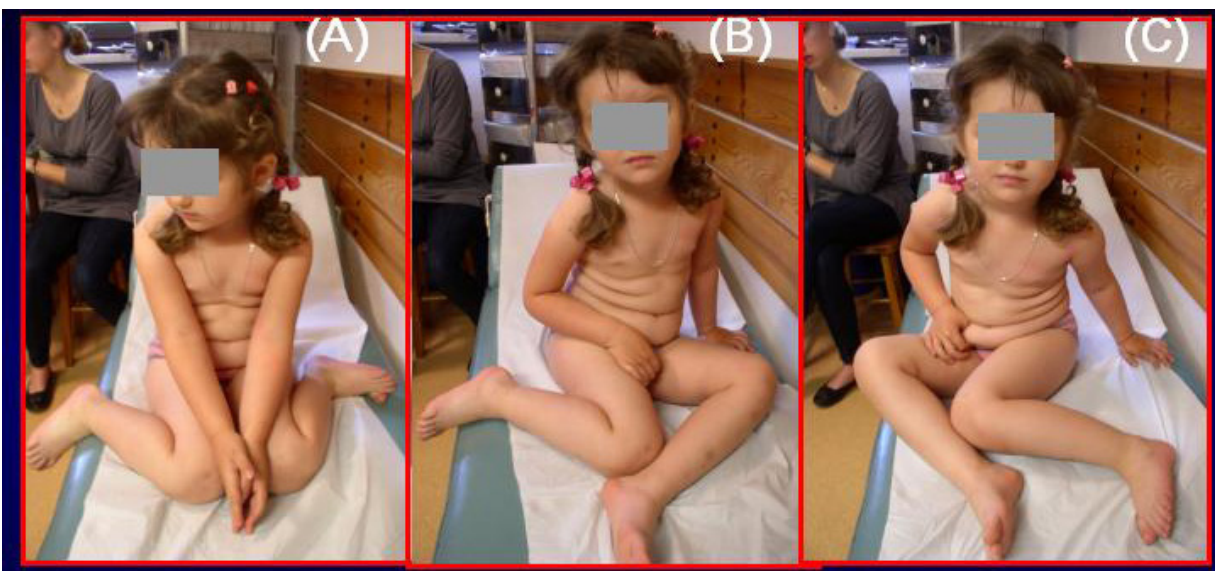


Figure 15: Girl 5 years – In anamnesis and in clinical examination symptoms of MBD. General laxity of joints enables pathological sitting (A) (B) (C). In the result of wrong position – genua valga, bigger Antetorsion (AT) of the femur neck and in result dysplasia of hips. The gait “toes in”.



Figure 16: The same girl as in Figure 15. On this figure – proper sitting position what we called in orthopedic language “Polish position of sitting” or “butterfly position of sitting” in karate language. In this position should sit all children on the world. Such sitting enables proper development of hips, proper axis of legs, proper conditions for development of spine.

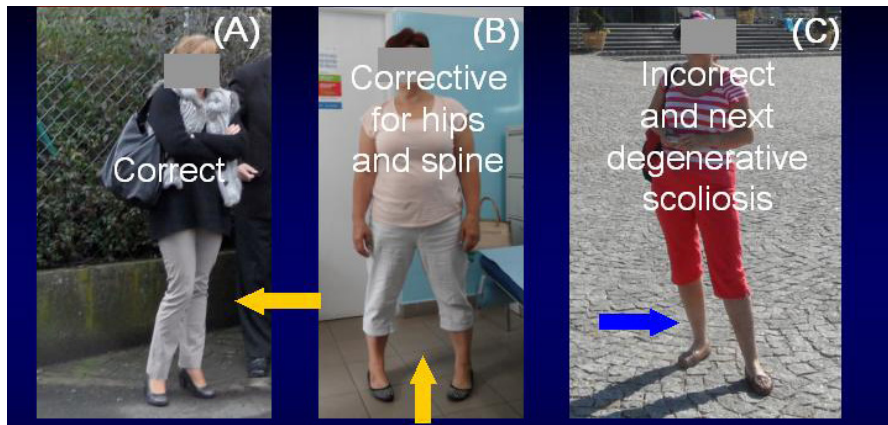


Figure 17: Manner of standing (A) (B) (C). Correct standing (A) on the left leg – protect from scoliosis. Standing in abduction and internal rotation (B) is very beneficial for the hips and spine. Such standing is typical for karate. Standing ‘at ease’ on the right leg (C) is permanent and because of this - is the cause of scoliosis in two groups and pathology for the right hip and right knee.



Figure 18: Sitting. Methods of physiotherapy as prophylaxis of arthrosis of the hips. A special form of standing and sitting should be introduced at the age of 45 – 50. Sitting – in internal rotation, which increases the range of this movement. Similar opinion Prof. Britta Fuchs / Fresenius University Idstein, Germany. Patients should sit in this position every day in every situation.



Figure 19: Improper / wrong position of sitting. Such sitting is the cause of instability of the knee joints and pain. It is also the cause of limited movement of the hip or hips and also cause of the hip pain. Articles: India, UK.

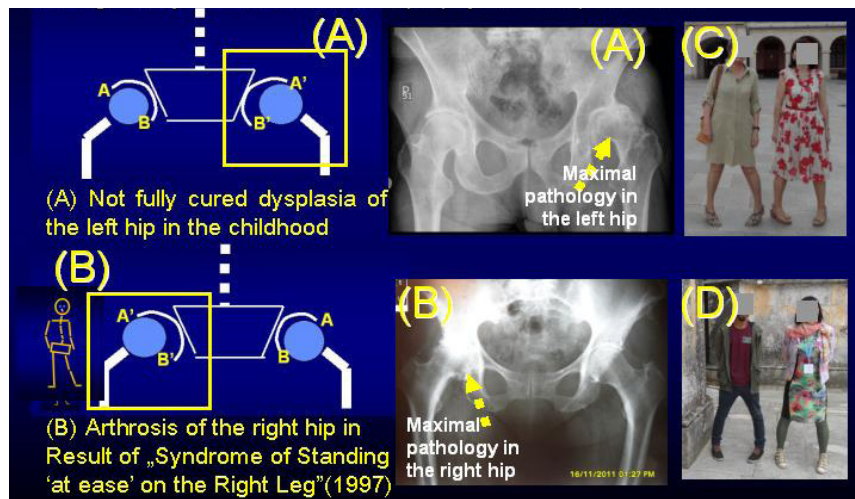


Figure 20: (A) Example of advanced arthrosis in the left hip with heavy symptoms - pain, limping. In childhood never treated. (B) Pain in both hips – in the right hip because of permanent standing ‘at ease’ on the right leg. (C) & (D) proper standing – easy method for effective prophylaxis of hips arthrosis.



Figure 21: Proper shoes are essential. (A) & (B) improper shoes - reduce dorsal flexion in the ankle joint (A) and reduce the plantar flexion of the toes in metatarsal phalangeal joints (B). In photos (C) & (D) proper exercise for the toes. In picture (E) improper getting out of the car – on one leg - in result rotation distortion of the ankle joint and knee. In picture (F) proper getting out of the car - two legs. Publication about this subject in Germany, USA, India/UK, Czech Republic (1970/ 2016 – 2021). www.ortopedia.karski.lublin.pl

3. Important rules of prophylaxis for newborns, babies and all children an every age as well for adults. Explanation short in points.

A/ Nursing on demand until the age of 1 or even 2 is absolutely essential. It has not only nutritive value, but is important from the psychological point of view - contact - child and mother.

B/ It is forbidden to tie hat straps under the child's chin – this can block blood circulation for head / for brain because of pressing on the vessels – vena jugulars superficially. Hats with straps are common in Poland and other Slavic countries, but not in England, Germany and other western countries – author's observations in years 1961 - 2024.

C/ Permanent positive contact with mother or father is absolutely essential. It is crucial for the psychological development and relieves stress. Such behavior enables correct blood circulation in the brain – its mean good development of locomotor system.

D/ Carrying children. Babies, but also older – 2 – 3 year old children – should be carried in the front of mother's or father's body, facing the parent - with maximal hip abduction and knees flexed at a 90+ degree angle. Never with the facing front - to street, to shops.

Therapy or only prophylaxis of the wry neck (torticollis muscular) is possible at the same time. If there are symptoms of wry neck, the head should be turned to the torticollis side - in left wry neck – to the left, in right wry neck – to the right, and kept in this position up to 4 – 6 - 8 hours per day. Older children can be taught to sleep in prone position with the head turned to the torticollis side. This therapy is suitable for children from only a few weeks of age to 3 years. It is a new, highly efficient therapy – publication in Germany and in USA (T. Karski, J. Karski).

E/ It is allowed for children to stand and to walk – only after the age of one (1) year. Never earlier. And only in situation if the hips in clinical examination and in X-ray examination are fully normal.

F/ How to treat or prevent the varus deformity of the shanks or knees? We must exclude the Hueter – Volkmann law, what means - the child should no stand or walk for 3 to 4 months. After this time the axis of the legs will be spontaneously normal. The age for such therapy is for 1 till 2.5 years old children. At the same time, it is important to supplement vitamin D3. Such therapy is introduced by authors in Lublin in 1981. Publications in Germany and in USA.

G/ How to treat or prevent the valgus of the shanks / of the knees? Do not allow to sit in „TV position” with legs on side and directed back. All children the world should sit in „butterfly position”(term from karate). Such sitting gives full abduction of hips and proper its development, proper axis of knees. In “butterfly position” – the spine is relaxed - not in strait position (!) and it is prophylaxis for “scoliosis” (many publications in USA, Canada, Czech Republic - T. Karski).

H/ Walking with the „toes inwards” - the cause of such gait is improper sitting with legs apart – on side (see point G). Such way of sitting causes bigger than normal antetorsion (AT) of the neck and head of the femurs, and bigger than normal internal rotation of the hips – and as a result give the „toes-in gait”. Therapy and prophylaxis – proper sitting like in karate – “butterfly position” (see point G).

I/ Proper sitting, like in karate, is necessary for all children in all countries in the world. Such sitting gives good hips – with deep acetabulum, with proper horizontal and concave roof of hips joints and proper antetorsion of femoral neck and head (AT) – see point G. Enables proper axis of legs.

J/ While sitting in the “butterfly position” or on a chair – the spine should be relaxed – never straight up. Only such position of spine - prevents scoliosis. Standing ‘at ease’ on the left leg is equally important - see next points.

K/ Jumping on hard floor should be avoided. Jumping, especially on a hard surface can cause necrosis of femoral head – Legg – Waldenström – Calve - Perthes disease – described in literature as ”Perthes disease”. Publication in USA / Kansas.

L/ The children with mal-position of pelvis and spine – buttock backwards, abdomen frontward, recurvation of knees, plane valgus position of feet – present the clinical symptom of Minimal Brain Dysfunction (MBD). Other description of such disorders is Attention Deficit Hyperactivity Disorders (ADHD). These children need very early, proper therapy - stretching exercises to lengthened all shortened (contracted) soft tissues – muscle, tendons, fascia, capsules of joints. For these children the best is sport like karate, taekwondo, aikido, kung fu – because comprises elements of stretching. Such therapy gives very good results and can be seen as method of prevention and/or therapy for older persons.

M/ It is forbidden to stand permanently ‘at ease’ on the right leg for all children in the world. Such standing leads to the „So-Called Idiopathic Scoliosis” in two groups in new classification (many publications about this subject in USA, UK, India, Czech Republic – T. Karski – 1995 – 2024).

N/ It is forbidden to stand ‘at ease’ on the right leg for all adults. Such standing is the cause of degenerative scoliosis – lumbar left convex – and “symptoms of spine pain”. The adults should:

a/ stand in abduction and in internal rotation of hips – like in karate,
b/ should sit with knees together and feet maximally apart, to receive the full internal rotation of hips,

c/ should walk in abduction of legs 30 cm or more,

d/ should sleep on abdomen / on stomach / in prone position and in flexion and abduction of hip. These rules protect from arthrosis and the necessity to make prosthesis of the hips at older persons.

Correction of English text

MA Honorata Menet, University in Caen, France and Mr David Poynton, Lublin, Poland.

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