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QUESTIONNAIRE FOR PRIMARY CARE PHYSICIANS IN TASHKENT ON CONNECTIVE TISSUE DYSPLASIA

Abdullaeva D. T.
Akhmedova G. Kh.
Khudoykulov E. A.
Department of Children's Diseases of the Tashkent Medical Academy, Tashkent, Uzbekistan

Annatation
The article presents the results of a survey conducted for primary care physicians in Tashkent. The survey involved 57 doctors of polyclinic No. 52, Yunus-Abad district.
Studies have shown that when doctors were asked about connective tissue dysplasia, 27 answered positively (47.3%), and 30 did not know. When children went to the polyclinic, only 10 (17.5%) doctors out of 57 found signs of connective tissue dysplasia. None of the doctors noted signs of CTD in outpatient cards. The presence of several chronic diseases at the same time was noted by only 8 doctors (14%) out of 57.
Analysis of the questionnaire data showed that the highest percentage (56.4%) of practitioners had knowledge of urinary tract changes in CTD, and the lowest percentage (21.9%) had knowledge of pulmonary changes.
Most practitioners in Tashkent are poorly aware of the external phenotypic signs of CTD and the stigmas of dysembryogenesis that underlie the pathogenesis of chronic diseases.

Keywords: children, survey, connective tissue dysplasia, phenotypic signs, stigmas of disembryogenesis

The relevance of the issue. The peculiarity of the structure and function of the connective tissue creates a possibility for the development of a greater number of its anomalies and diseases, leading to gene defects with a certain type of inheritance, or as a result of mutagenic effects of adverse environmental factors during the fetal period (adverse environmental conditions, unbalanced nutrition, stress, etc.) [1].
As noted, most practitioners do not know about diseases caused by connective tissue dysplasia (CTD), a disease which leads to dysfunction of all organs and systems and chronicity of the process [2,3,4]. The development of pathological conditions of the connective tissue takes place due to its participation in the biomechanical (supporting), metabolic, morphogenetic, and reparative functions.
Connective tissue dysplasia ("dis" - disorders, "plasia" - development, formation) is a dysfunction of the structure of connective tissue in the embryonic and postnatal periods due to genetically altered fibrillogenesis of the extracellular matrix, which leads to a progressive disorder of homeostasis at tissue and organ levels [4,5]. Morphologically, the disease is characterized by changes in collagen, elastic fibrils, glycoproteins, fibroblasts, and proteoglycans, leading to changes in both quantitative and qualitative structures of the connective tissue, which are based on the inherited mutations of genes encoding the synthesis and spatial organization of collagen, protein-carbohydrate complexes, as well as mutations in the genes of enzymes and their co-factors [5,6]. Currently, one of the controversial scientific issues is the lack of a single, generally accepted classification. The most

commonly used approach is based on the genetically differentiated diagnosis of CTD. In 2000, T.I. Kadurina et al. identified the three most common forms of non-syndromic CTD: MASS-phenotype, marfanoid, and Ehlers-like phenotypes. This classification is the most common since non-syndromic forms of CTD are "phenotypic" copies of known syndromes. Thus, the marfanoid phenotype is characterized by a combination of signs of generalized connective tissue dysplasia with asthenic physique, dolichostenomelia, arachnodactyly, damage to the valvular apparatus of the heart, and progressive visual impairment. With an Ehlers-like phenotype, there is a combination of signs of generalized connective tissue dysplasia with a tendency to skin hyperextensibility with varying degrees of joint hypermobility. The MASS-phenotype is characterized by signs of generalized connective tissue dysplasia, a number of cardiac disorders, skeletal anomalies, and skin changes in the form of thinning or the presence of areas of subatrophy. In connection with multi-organ dysfunctions in CTD, a classification approach is proposed with the separation of syndromes associated with dysplastic-dependent changes and pathological conditions: neurological disorders syndrome, asthenic syndrome, valvular syndrome, vascular syndrome, eye pathology syndrome, foot pathology syndrome, vertebrogenic syndrome, etc. [6,7]. For example, autonomic dysfunction syndrome is one of the very first to form in a significant number of patients with CTD and is considered an obligatory component of the dysplastic phenotype. In most patients, sympathicotonia is detected, a mixed form is less common, and in a small percentage of cases - vagotonia. The severity of the clinical manifestations of the syndrome increases in parallel with the severity of CTD. Autonomic dysfunction is observed in 97% of cases of hereditary syndromes, with an undifferentiated form of CTD - in 78% of patients. In the formation of vegetative disorders undoubtedly genetic factors play a significant role in underlying the violation of metabolic processes in the connective tissue and the formation of morphological substrates, which leads to a change in the function of the hypothalamus, pituitary gland, sex glands, and the sympathetic-adrenal system. The manifestations of collagenopathies in the musculoskeletal system are considered to be: joint hypermobility syndrome, weakness of the ligamentous apparatus of the spine and foot with the formation of scoliosis, and flat feet [6,7]. Joint hypermobility syndrome deserves special attention since a characteristic manifestation of this condition is a high sensitivity to physical exertion and a tendency for frequent injuries. Periarticular damages (bursitis, tunnel syndrome) with symptoms of joint hypermobility.

The following criteria are used at the stage of clinical and anamnestic examination:

T. Milkowska-Dimitrova and A. Karkashev (1985), take into account the primary and secondary signs of CTD. The primary signs include flat feet, varicose veins, hypermobility of the joints, gothic palate, pathology of the organs of vision, deformity of the chest and spine, increased extensibility, and flabbiness of the skin, long thin fingers. [7].

Secondary signs: abnormalities of the auricles and teeth, transient articular pain, dislocations and subluxations of the joints, etc. [7]. An examination by an ophthalmologist, orthopedist-traumatologist, and cardiologist is mandatory. The diagnosis of Ehlers-Danlos syndrome should also be carried out, based on the Villefranche criteria (major and minor diagnostic criteria), which include: increased skin extensibility, and joint hypermobility (joint sprain, dislocations, and subluxations, flat feet), muscle hypotension, hereditary predisposition to the disease.

The Purpose of the Study

To study the level of awareness of primary care physicians about the signs of connective tissue dysplasia and its prevalence in children living in the city of Tashkent.

Materials and Methods

We surveyed primary care physicians in Tashkent city. The study was carried out in the form of a questionnaire, for which a specific questionnaire form with deciphered signs of connective tissue dysplasia was developed.

Questionnaires were distributed to 57 doctors of family medical polyclinic No. 52 in Tashkent city (questionnaires are attached).

Questionnaire for the detection of connective tissue dysplasia for doctors

1. Surname, name, patronymic name.

2. Gender.

3. Age.

4. Place of employment of the doctor.

5. Speciality.

No			Yes	No
1.	Do you know about connective tissue dysplasia?			
2.	Have you previously noticed children who had signs of connective tissue dysplasia?			
3.	Did you note the abovementioned signs in the outpatient questionnaires?			
4.	How often do your patients have simultaneous multiple chronic diseases?			
5.	What external phenotypic features do you know? Please underline what you have observed in your patients.			
	Signs	**Specifically:**		
6.	**Craniocephalic signs**	dolichocephaly, short or long neck, or curvature, deviated septum, nosebleeds, skull deformity, bird's beak, zygomatic hypoplasia, slant chin;		
7.	**Oral manifestation:**	the gothic palate, non-occlusion of the lip and upper palate, teething anomalies, splitting of the tongue, malocclusion, striation of the tongue, thick lips with grooves, small or large mouth.		
8.	**Ear reshaping:**	low or asymmetric ears, small or attached earlobes, no tragus, very large and protruding ears, congenital hearing loss, soft ear cartilage, crumpled ears;		
9.	**Skin manifestations:**	hypertrichosis, angioectasias, dry wrinkled skin, increased skin extensibility, thin vulnerable skin, atrophic scars, hernias in childhood, muscular hypotension, postoperative hernias, a tendency to allergic rashes, the fragility of skin vessels, keloid scars, atrophic striae, corns on the back of the feet, visible venous network;		
10.	**Changes in the shape of the spine:**	chest deformity, funnel chest deformity, cobbler's chest, chicken breast, back-Bifidum, scoliosis, kyphosis, juvenile osteochondrosis, increased bone fragility		
11.	**Articular manifestations:**	hypermobility, hip dysplasia, dislocations and subluxations, arthralgias, arthritis, tendon ruptures, family variants of increased flexibility;		
12.	**Changing the shape**	short and crooked little fingers, thickening of the nail phalanges,		

	of the hands:	arachnodactyly, brachydactelia, syndactyly, clinodactyly nail growth disorder		
13.	**Changing the shape of the leg**	varicose veins, flat feet of various variations, X-O-shaped curvature of the legs, sandal gap, Hallux-valgus (calcaneal-valgus clubfoot).		
14.	**Do you know the stigmas of dysembryogenesis?**			
15.	**Eye changes:**	various myopia, astigmatism, blue sclera, epicanthus, hypo- or hypertelorism, short or narrow eyes, gaps, ptosis, progressive abnormal vision, cataracts;		
16	**Changes in the cardiovascular system:**	mitral valve prolapse, additional chords of the left and right ventricles in various variations, arrhythmia;		
17	**Lung changes:**	spontaneous pneumothorax, apical bullae, trachiobronchomegaly, tracheobronchial dyskinesia; [8].		
18	**Changes in the organo-abdominal cavity:**	abnormal development of the gallbladder, biliary dyskinesia, cholelithiasis, gastroduodenitis, gastroesophageal reflux, megacolon, dolechosigma; nocturnal/daytime fecal incontinence, irritable bowel syndrome;		
19	**Changes in the urinary organs:**	doubling of the pyelocaliceal system; nephroptosis, vesicoureteral reflux, dysmetobolic nephropathy; night/daytime urinary incontinence;		
20	**Changes in the nervous system:**	lumbosacral ectasia, autonomic dysfunction, behavioral and sleep disturbance, paroxysmal condition.		

General practitioner awareness questionnaire.

No.		Yes	No
1.	Do you know about connective tissue dysplasia?	91	7
2.	Have you previously noticed children who had signs of connective tissue dysplasia?	80	18
3.	Did you note the above signs in the outpatient questionnaires?	56	42
4.	How often do your patients have multiple chronic diseases at the same time?	63	35

Phenotypic traits	**The total number of listed (considered) features**	**The total number of features not taken into account**	**% of signs taken into account**
Craniocephalic signs (10 signs)	422	488	46.3%
Oral manifestations (9 signs)	452	367	55.1%
Changes in the shape of the ears (7 **signs**)	345	292	54.1%
Skin manifestations (12 signs)	522	570	47.8%
Spinal changes (eight signs)	390	338	53.5%
Articular signs: (5 signs)	320	135	70.3%
Changes in the shape of the hands (8 signs)	340	388	46.7%
Changes in the shape of the leg (6 signs)	260	286	62.2%
Eye changes	456	363	55.6%

(9 signs)			
Cardiovascular changes (3 signs)	146	127	53.4%
Pulmonary changes: (4 signs)	189	175	51.9%
Abdominal changes (9 signs)	433	386	52.8%
Changes in the urinary organs (5 signs)	163	292	35.8%
Damages in the nervous system (5 signs)	118	337	25.9%

No.		Yes	No
1.	Do you know about connective tissue dysplasia?	27	30
2.	Have you paid attention to children who had signs of connective tissue dysplasia?	10	47
3.	Did you note the above signs in the outpatient questionnaires?	0	0
4.	How often do your patients have multiple chronic diseases at the same time?	18	49

Phenotypic traits	**Total number of features listed**	**The total number of features taken into account**	**% of signs taken into account**
Craniocephalic signs (10 signs)	186	384	32.6%
Oral manifestations (9 signs)	200	313	38.9%
Changing the shape of the ears (7 **signs**)	171	228	42.8%
Skin manifestations (12 signs)	222	291	43.2%
Spinal changes (eight signs)	185	271	40.5%
Articular signs: (5 signs)	174	111	61%
Changes in the shape of the hands (8 signs)	171	285	37.5%
Changes in the shape of the leg (6 signs)	151	191	44.1%
Eye change (9 signs)	207	306	40.3%
Cardiovascular changes (3 signs)	60	114	34.4%
Pulmonary changes: (4 signs)	fifty	178	21.9%
Abdominal changes (9 signs)	213	300	41.5%
Changes in the urinary organs (5 signs)	161	124	56.4%
Damage to the nervous system (5 signs)	113	172	39.6%

The results of the research discussion demonstrated that when interviewing doctors about connective tissue dysplasia, 27 answered positively (47.3%), and 30 did not know. When children went to the polyclinic, only 10 (17.5%) doctors out of 57 were able to find signs of connective tissue dysplasia. None of the doctors noted signs of CTD in outpatient cards. The presence of several chronic diseases at the same time was noted by only 8 (14%) out of 57 doctors. Thus, practicing doctors in Tashkent have poor knowledge of CTD.

According to the survey, 57 doctors from polyclinics of Tashkent city were interviewed. An analysis of the study of personal data showed that a larger percentage (56.4%) of doctors have knowledge about changes in the urinary organs in CTD, and the lowest percentage (21.9%) are informed about pulmonary changes [8].

They are also familiar with the changes in the shape of the ears (42.8%), skin manifestations (43.2%), changes in the shape of the legs (44.1%), changes in the abdominal organs (41.5%), familiarity with the rest of the symptoms are lower (40%).

Thus, most practitioners in Tashkent are poorly aware of the external phenotypic signs of CTD and the stigmas of dysembryogenesis, which lie in the basis of the pathogenesis of chronic diseases [8].

Based on the above, it is necessary to familiarize primary care practitioners with CTD and the stigmas of dysembryogenesis.

The following is recommended.

1. Organize seminars on this topic.
2. Write guidelines for general practitioners about CTD.
3. After studying this pathology, organize a second survey, which in the future will serve as a more reliable diagnosis, treatment, and prevention measure for children and adult patients with CTD.

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