

of numerous signs of CTD [1, 3] in the form of the corresponding phenotype (the number of external stigmas more than 10), the propensity to keloid scars, four pneumothoraxes in his history (removed the upper lobe of the right lung) and mitral valve prolapse. Among the other five people in two cases it was identified heredity, burdened by the early development of CV diseases. The other three young people had no any RF, besides increased vascular rigidity, reflecting the presence of the syndrome EVA.

Presented data confirm the idea about the feasibility of angiological screening among the active population, starting at a young age. The results indicate the presence of accelerated vascular aging every tenth-ninth representative students. Experts attribute the emergence of the EVA syndrome with modern lifestyle associated with the widespread use of fast food, smoking, physical inactivity, high stress level of loads, deteriorating environmental conditions, etc [6]. Therefore, it is advisable to intensify the implementation of the system of diagnostic screening for the timely detection

of early vascular aging by the type of EVA syndrome among young adults. The same approach is shared by Chinese researchers who performed a 26-year prospective study of vascular stiffness parameters in terms of the shoulder-ankle index at 4623 school pupils aged 6–15 years living in one of the industrialized areas of China [4]. The authors also emphasize the greater propensity of the vascular wall to the accelerated aging in boys compared to girls.

Conclusions. Our results show that in addition to the traditional RF the constitutional hereditary characteristics of the organism may contribute to increasing of the stiffness properties of the vascular wall. This requires a differentiated approach to the interpretation of results of instrumental angiological screening in connection with the entire data set of the objective status of each subject. Only such individual approach to the interpretation of screening data will then allow to create personalized program of preventive measures directed to effective correction of the manifestations of the EVA syndrome among young people.

References

1. Druk I. V., Nechaeva G. I., Oseeva O. V., Pomorgajlo E. G., Maksimov V. N. [et al.] Personalized assessment of risk of development of unfavourable cardiovascular manifestations in young patients with connective tissue dysplasia. *Cardiology*. 2015;55(3):75-84. doi: 10.18565/cardio.2015.3.75-84
2. Evseyeva M. E., Eremin V. A., Eremin M. V., Galykova I. Yu., Chudnovskiy E. V., Rusidi A. V. The student's health center: the main activities at the present stage. *Preventive Medicine*. 2013;16(1):8-12.
3. Eremin M. V., Evseyeva M. E., Koshel V. I. Heredity connective tissue diseases and student's medical examination: aspects of screening diagnosis. *Medical News of North Caucasus*. 2016;11(2):351-353. doi: 10.14300/mnnc.2016.11075
4. Chu C., Dai Y., Mu J., Yang R., Wang M. [et al.] Associations of risk factors in childhood with arterial stiffness 26 years later: the Hanzhong adolescent hypertension cohort. *J. Hypert.* 2017; 35, Suppl.1:10-15. doi: 10.1097/HJH.0000000000001242
5. di Chiara A., Vanuzzo D. Does surveillance impact on cardiovascular prevention? *Eur. Heart. J.* 2009;30(9):1027–1029. doi: 10.1093/eurheartj/ehp025
6. The ESC Textbook of Preventive Cardiology. Ed. by Gienlen S., De Backer G., Piepoli M., Wood D., Jennings C., Graham I. Oxford University Press, 2016.

About authors:

Evseyeva Maria Evgenyevna, MD, PhD, Professor, Honored Doctor of RF, Head of the Department of Faculty Therapy, Head of the Student's Health Center; tel: +79283154687; e-mail: evseieva@mail.ru

Fursova Elena Nikolaevna, MD, Physician of the Student's Health Center; e-mail: elenka85.08@inbox.ru

Eremin Mikhail Vladimirovich, MD, PhD, Physician; e-mail: eremin2007@mail.ru

Koshel Vladimir Ivanovich, MD, PhD, Professor, Head of the Department of Otorhinolaryngology with the course of PDE; e-mail: lorfpdo@stgmu.ru

Baturin Vladimir Aleksandrovich, MD, PhD, Professor, Head of the Department of Clinical Pharmacology with course of PDE; e-mail: innova@stgmu.ru

Shchetinin Evgeny Vyacheslavovich, MD, PhD, Professor, Vice-Rector for Scientific and Innovative work, Head of the Department of Pathological Physiology; e-mail: firstpro@stgmu.ru

© Group of authors, 2017

UDC 61:796.071:613.72

DOI – <https://doi.org/10.14300/mnnc.2017.12082>

ISSN – 2073-8137

ATHLETE FOLLOWED BY HEALTHCARE PROFESSIONALS

Vershinin E. G., Delaru V. V., Muravieva N. A.

Volgograd State Medical University, Russian Federation

ПРОБЛЕМАТИКА МЕДИЦИНСКОГО СОПРОВОЖДЕНИЯ СПОРТСМЕНОВ

Е. Г. Вершинин, В. В. Деларю, Н. А. Муравьева

Волгоградский государственный медицинский университет, Российская Федерация

Questionnaire of 120 sports medicine physicians is to ascertain sports medicine doctors' views on athlete health-care issues. Insufficient medical coverage provided for athletes (25.0 % of respondents underlined its insufficiency, 43.4 % respondents pointed out some lacks in it); ex-athlete regular medical check-up problems (49.2 % of respon-

dents considered them not to be worked out properly), sports medicalization (67.5 % of respondents noted athletes' multiple drug intake initiated by their coaches), insufficient information about drug side effect on athlete health (12.5 % of physicians stated that athletes are instructed properly). These issues are considered to be interdisciplinary and cannot have a single valued solution. They have to be broadly discussed by specialists.

Keywords: sports medicine, athlete healthcare, sports medicalization, athletes' awareness, questionnaire

Анкетирование 120 врачей спортивной медицины, осуществляющих медицинское сопровождение спортсменов, указало на существующие проблемы в данной области здравоохранения: несовершенство правового обеспечения лечения спортсменов (25,0 % респондентов подчеркнули его недостаточность, 43,4 % респондентов указали на некоторые пробелы в нем); проблемы диспансерного наблюдения за спортсменами (49,2 % респондентов сочли его недостаточно эффективным), спортивная медикализация (67,5 % респондентов указали на необоснованное употребление спортсменами лекарственных препаратов, инициированное тренерами или самими спортсменами), недостаточная информативность о побочных эффектах лекарственных препаратов (12,5 % врачей заявили, что спортсмены были проинструктированы). Поднятые вопросы рассматриваются как междисциплинарные и требуют решения специалистами по различным аспектам.

Ключевые слова: спортивная медицина, анкетирование, спортивная медикализация, информированность спортсмена, опрос, медицинское сопровождение спортсмена

Athlete followed by healthcare professionals is one of the main issues in modern sports. They deal with different tasks as well as «routine problems» [2, 3, 5]. That's why views of sport medicine physicians are of particular interest.

Objective: to reveal sports medicine physicians' views on athlete healthcare provider its problems.

Material and Methods. Questionnaire was conducted in accordance with requirements of sociological studies. It included (without regard to «passport» data of respondents) 25 questions concerning athlete and ex-athlete followed by healthcare professionals (the subjects of questionnaire were legal aspects of regular medical check-up and care of health delivery to athletes; range and reasons of drug intake as on general sales improving psychophysiologic responses of sportsmen so as on prohibited lists; insufficient information on drug side effect on athlete health in multiple drug intake. Anonymous questionnaire of 120 physicians (continuous cluster samplings) in Volgograd clinical rehabilitation center and its affiliated establishments were conducted in 2014. 62 (51.7 %) respondents had a certificate in «physical therapy and sports medicine», 58 (48.3 %) had other medical specialties certificates; 94 (78.3 %) respondents were females, 26 (21.7 %) were males; 65 (54.2 %) respondents had an employment history of less than 10 years, 55 (45.8 %) had an employment history 10 and more years.

Results and Discussion. The data obtained from a comparative study showed that 90,8 % of respondents agreed that nowadays athlete followed by healthcare professionals is one of the main and essential health and social issue; 7.5 % of physicians % had some doubt about it or had difficulty in responding. 36.7 % of physicians considered the questions about regular medical check-up to be profoundly covered, 45.8 % – partly covered, 6.7 % had difficulty in responding. Physicians' views on ex – athlete regular medical check-up turned out to be as follows: 5.0 % of respondents considered it to be profoundly covered, 27.5 % – partly covered; 49.2 % – practically uncovered (physicians with an employment history of 10 and more years held this view: 56.4 % opposed to 43.1 %); 18.3 % of respondents had difficulty in responding.

67.5 % of physicians believed that nowadays multiple drug intake by athletes is groundless, 14.2 % controverted it, 18.3 % had difficulty in responding. Physicians underlined the increased number of athletes taking drug on

general sales list. A third of respondents think that nearly half of athletes at the age of 15 and older take such drugs.

In recent years medicalization problem has arisen. Medicalization is the process by which human conditions and problems come to be defined and treated as medical conditions (thus becomes the subject of medical study, diagnosis, prevention, or treatment) [1, 4, 6]. In special literature various aspects of sports medicalization which is confirmed by sports medicine doctors are considered [9].

45.8 % of physicians considered athletes to be responsible for increased multiple drug intake; 42.5 % linked it with coaches, 27.5 % pointed out pharmaceutical firms leading combative advertising, 25.0 % associated it with sport managers, 23.0 % had difficulty in responding. Work experience played a significant role in responding: physicians with an employment history less than 10 years pointed out trainers (41.5 %), athletes (38.5 %) and peculiarities of the sport of setting records (25.0 %); their more experienced colleagues referred to athletes (54.5 %), coaches (43.6 %), pharmaceutical firms leading combative advertising (29.1 %). It should be noted that physicians were mentioned rarely (11.7 %).

At the same time, 16.7 % of respondents noted that in their practice athletes often asked them to recommend some drugs improving psychophysiologic responses; 32.5 % – termly, 40.0 % – very rare or never and 10.8 % had difficulty in responding.

As for drug intake on prohibited list to achieve setting records are concernly, physicians' responses showed that many athletes are willing to do it: in opinion of 7.5 % of physicians not less than 50 % of athletes were set for it, 23.3 % of physicians pointed to 20-30 % of athletes; 20.0 % pointed to 10 % of athletes; 29.2 % pointed to only some of athletes (20.0 % of physicians had difficulty in responding).

Legal coverage assessment of athletes related to common diseases and injuries, administration of vitamins, nutrition supplements and other medicines excluding drugs on prohibited list was quite critical: 8.3 % of physicians stated it to be complete, 43.4 % of physicians highlighted the presence of particular problems in it, 25.0 % of physicians highlighted its incompleteness and 23.3 % of physicians had difficulty in responding.

Information awareness on drug side effect on athlete health was then discussed. Moreover, in recent years

cases of liver damage occur more often due to the use of nutrition supplements which safety is hardly to be estimated; low quality control of nutrition supplements compared with prescription drugs; difference in based and labeled ingredients [7, 8].

In opinion of 10.8 % of respondents athletes were profoundly informed about drug side effect on general sales list on health to achieve the sport records (trainers, consulting team physicians, private physicians, providers and so on); in opinion of 48.4 % of respondents athletes were partly informed; in opinion of 15.8 % of respondents athletes were not informed; 25.0 % of respondents had difficulty in responding. Physicians' views were the same concerning drug side effect on prohibited list on athlete health (15.8 %, 42.4 %, 10.8 % and 30.0 % correspondingly).

12.5 % of physicians believed that athletes were profoundly informed about possible drug side effect on general sales list on health; 63.3 % of physicians believed that they were partly informed; 7.5 % of physicians believed that they were not informed; 16.7 % of physicians had difficulty in responding. Physicians' views were the same concerning information awareness on drug side effect on prohibited list on athlete health (17.5 %, 63.3 %, 5.8 % and 13.3 % correspondingly).

Physicians underlined the necessity to organize training sessions for athletes according to the lack of information awareness on drug side effect on general sales and prohibited lists on their health (85.0 % of physicians confirmed it; 6.8 % had some doubt about it; 4.2 % refuted it and had difficulty in responding). Obviously, such training sessions would not prevent multiple drug intake on general sales and prohibited lists by a definite num-

ber of athletes (at present or future), but would allow to reduce the amount of such drug intake as these training sessions are not to be isolated.

Atypical and typical cases of diseases in athletes due to prolonged multiple drug intakes were taken into account then. 32.5 % of physicians believed that atypical case of any diseases was due to prolonged multiple drug intakes; 40.0 % refuted it and 27.5 % had difficulty in responding. Physicians' views were the same toward athletes who terminated their athletic career: 23.3 % of physicians noted partial atypical case of any diseases; 45.0 % refuted it and 31.7 % had difficulty in responding. Physicians' views on the most common pathologies in athletes who terminated their athletic career were conceivable: musculoskeletal disorders (70.8 % of physicians) and cardiovascular failures (56.7 % of physicians) were distinguished more often. 7 % of physicians thought that psychological disorders (alcoholism, neurotization, psychopathy) were representative of athletes. Endocrine (14.5 %) and respiratory diseases (5.5 %) were termed rarely.

Conclusions. A lot of «routine problems» related to athlete followed by healthcare professionals (in particular, unsound legal treatment coverage in diseases and injuries, ex-athlete regular medical check-up problems, sports medicalization in insufficient drug side effect information on athlete health in multiple drug intake and so on). These issues are considered to be interdisciplinary and cannot have a single valued solution. That's why they have to be broadly discussed by specialists (not only medical ones). Sports medicine forums seem to be the optimal opportunity aimed at realization of concrete practical recommendations for sport medicine physicians.

References

1. Conrad P., Mackie T., Mehrotra A. Estimating the costs of medicalization. *Social Science & Medicine*. 2010;70:1943-1947.
2. Fedotova I. V., Statsenko M. E., Vershinin E. G. Social research disadaptation predictors in ex-athletes. *Medical sociology*. 2013;1(22):23-26.
3. Kukes V. G., Gorodetskiy V. V. Sports Pharmacology: achievements, problems, prospects. *Sports medicine: science and practice*. 2010;1(1):12-15.
4. Landyr A. P., Achkasov E. E., Dobrovolskiy O. B., Runenko S. D., Sultanova O. A. Definition of training zones of heart rate for athletes. *Sports medicine: science and practice*. 2013;1:40-45.
5. Metzl J., Herzig R. Medicalisation in the 21st century: introduction. *Lancet*. 2007;369:697-698.
6. Puzin S. N., Achkasov E. E., Mashkovskiy E. V., Bogova O. T. Professional diseases and disabilities in professional athletes. *Sociomedical expertising and rehabilitation*. 2012;3:3-5.
7. Sadler J. Z., Jotterand F., Lee S. C., Inrig S. Can medicalization be good? Situating medicalization within bioethics. *Theory Med. Bioethics*. 2009;30(6):11-25.
8. Venevcheva U. L. *Sports medicine: science and practice*. 2014;2:83-86.
9. Vershinin E. G. The problem of medicamentous accompaniment of athletes. *Sports medicalization issues. Volgograd scientific medical journal*. 2014;1(41):13-15.

About authors:

Vershinin Evgeniy Gennadyevich, Ph.D., Associate Professor, Head of the department of medical rehabilitation and sports medicine with a course of medical rehabilitation, physical therapy, sports medicine, physiotherapy; tel.: +79889886999; e-mail: werschinin_eugen@list.ru

Delaru Vladimir Vladimirovich, DMSc, Professor of General and Clinical Psychology Department; tel.: +79061665791; e-mail: vvdnvd@gmail.com

Muravieva Nataliya Alekseevna, Assistant of medical rehabilitation and sports medicine with a course of medical rehabilitation, physical therapy, sports medicine, physiotherapy; tel.: +79033174652; e-mail: natysya1984@yandex.ru