Primary Health Care: Open Access

Gout Management in Primary Health Care in Russian Federation

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Abstract

Objective: The study is aimed at evaluating the level of knowledge of out-patient doctors about modern methods of gout diagnostics and treatment.

Methods: The authors developed a questionnaire on gout diagnostics and treatment and carried out an anonymous survey of 50 primary care physicians and 21 rheumatologists.

Results: The study revealed low awareness of gout among first contact doctors. Doctors of both specialties use modern methods of diagnostics and treatment insufficiently. Only 62% of rheumatologists and 6% of therapists use Wallace criteria for gout diagnostics. Although 90% of rheumatologists and 42% of therapists specified identification of monosodium urate crystals by the method of polarizing microscopy as a "gold standard" of gout diagnostics, most of doctors noted impossibility of using a polarizing microscope at their workplaces.

Conclusion: It is necessary to take measures directed at increasing the knowledge of classification criteria and modern clinical recommendations about medical control of gout patients at the out-patient stage. It is advisable to pay special attention to studying the modern criteria of gout diagnostics and treatment at medical universities.

Keywords: Gout; Internists; Rheumatologists; Primary health care

Introduction

Rapid growth of gout incidence was noted around the world over the last decades [1-3]. Changes in the way of life and high prevalence of gout risk factors in population promote fast increase of general and primary incidence in Russia and in many countries of the world [2,3]. It is traditionally considered that gout is found in 1-3% of the population of the developed countries, mainly in men aged over 45 years [3,4]. However, modern literature has some information about decrease of the disease age and increase of gout cases in women [2].

Gout, as well as many other rheumatic diseases, is often the reason of disability of working-age people [4]. An important feature of gout is its negative influence on life duration [5-8]. This disease is reasonably considered as a risk factor of manifestation of early endothelial dysfunction and atherosclerosis, which leads fatal cardiovascular accidents [6-10]. Thus, high prevalence, continuously rising incidence, early disability, life quality decrease and high risk of death testify to the high social importance of gout and demand improvement of its identification, early diagnostics and optimization of medical care [1,11-13].

Despite the mechanisms of development and clinical features are well studied, early diagnostics of gout is poor [13]. Most Russian and foreign researchers indicate time of correct diagnosis as 6 to 8 years from the beginning of the disease [13-15]. According to various authors, the frequency of diagnostic mistakes is from 30 to 68% [16]. This is the most probable reason of gout late diagnostics [11,13].

Facts of wrong diagnosis were found in every fifth patient with gout [11]. According to Barskova, the main reason of gout late diagnosis is the nonobservance of standard recommendations, diagnostic and classification criteria of the disease [5,17]. Quite often, patients don't go to the rheumatologist for a long time, which also leads to chronic gout increase [11]. The mistakes of medical care are prescription of analgesics and ointments to patients during a severe attack of gout, application of prolonged glucocorticoids, that lead to a chronic process, prescription of allopurinol during the attack or, on the contrary, no prescriptions in the presence of direct indications [12]. Nowadays, the disease is rather well studied; there are many technical capabilities available in the modern medical science. Hence, there are no objective reasons for late diagnosis of gout [11].

Many patients with arthritis initially go to the local therapist. For timely gout diagnostics, special knowledge and skills are required. The knowledge of out-patient practitioners are insufficient [5,17]. Family doctors make correct and timely diagnoses of rheumatic diseases with smaller statistical probability, and operate these states less effectively from medical and economic viewpoints [14,17,18]. A referral to the rheumatologist improves the accuracy of diagnostics and outcomes [18]. A late referral to an expert can become a reason of deterioration the patient's condition and may even lead to disability [11].

The outcome of the disease and working ability of the patient finally depends on out-patient practitioners' knowledge about early symptoms of arthritis, correct differential diagnostics and examining the patient by a specialist, for example, by the rheumatologist [19]. Thus, the purpose of our study is to understand the knowledge of out-patient doctors about gout.

Methods

We questioned 50 out-patient therapists and 21 rheumatologists in Irkutsk (Russia). The organization of the survey was carried out according to the requirements to such kind of studies [20,21]. The survey studied the level of knowledge about gout of out-patient doctors. The specially developed anonymous questionnaire included questions about sex, age, years of work, average number of patients per hour, as well as points about principles of early diagnostics, correct treatment and problems of control in out-patient care.

49 women and 1 man took part in the questioning of therapists; their age was 46 ± 13.1 years (from 25 to 70 years). The average medical experience was 20 years (from 1 to 42 years). Nine people had adjacent

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specialties; the adjacent specialties were family doctors (7 persons), geriatrics (1 person), emergency medical service (1 person). The average number of patients was 4.8 patients per hour (from 4 to 8 people).

20 women and 1 man took part in the survey of rheumatologists; their average age was 40 ± 9.1 years (from 25 to 65 years). The average medical experience was 13 years (from 1 to 38 years). 10 doctors have adjacent specialties: therapy – 6 people, cardiology – 2 persons, professional pathology - 1 person, functional diagnostics – 1 person. The average number of patients was 3.8 patients an hour. The comparison of the surveyed doctors' characteristics and their official qualification are presented in (Tables 1 and 2).

The statistical data was processed in a software package of Primer Biostatistics. The distinctions were estimated by the criteria of z and χ2, the statistical significance p was <0.05.

Results

The brief results are presented in absolute and relative values in (Table 3 and Figure 1). The vast majority of therapists (94%) specify that only one patient with gout (and even less) comes to them every week, whereas 67% of rheumatologists note that they meet 2-5 patients. Perhaps, it testifies to a bigger trust of patients to rheumatologists, who are better informed about problems of diagnostics and treatment of rheumatic diseases.

80% of therapists note that gout patients visit them with acute arthritis, whereas more than a half of rheumatologists (62%) specify that patients come to them with complicated arthritis, already using drugs; the majority of patients come with a chronic form of gout (67%). Doctors of primary care are usually insufficiently trained to make differential diagnostics of early arthritis; and time for treatment is lost mainly at this stage [19].

In most cases, the typical clinical picture - acute arthritis of the 1st joint of foot- allows making correct diagnostics of gout. Nevertheless, with an atypical course of disease or in the process of progressing, some

| Parameters	Therapists (n=50)	Rheumatologists (n=21)
Ratio of men and women	1:49	1:20
Middle age (years)	46 ± 13.1	40 ± 9.01
Average duration of work (years)	20 ± 12.5	13 ± 9.02
Average number of patients an hour	4.8	3.8

Table 1: Characteristics of the surveyed groups.

Qualification category	Therapists (n=50)	Rheumatologists (n=21)
No	44%	53%
Second	14%	9%
First	24%	14%
Supreme	18%	24%

Note: distinctions are absent with the use of criterion χ2

Table 2: Qualification of doctors participating in the survey.

	Therapists	Rheuma-tologists	z	p
Using of Wallace diagnostic criteria	6%	62%	4.841	<0.0001
Informed about "the gold standard" of gout diagnosis	42%	90%	3.458	<0.0001
Correct value of hyperuricemia level	24%	48%	2.012	0.036
Correct mode of using the allopurinol	72%	100%	2.380	0.017

Table 3: Comparison of doctors' answers in groups.

Figure 1: Mode of the allopurinol prescription by therapists (%).
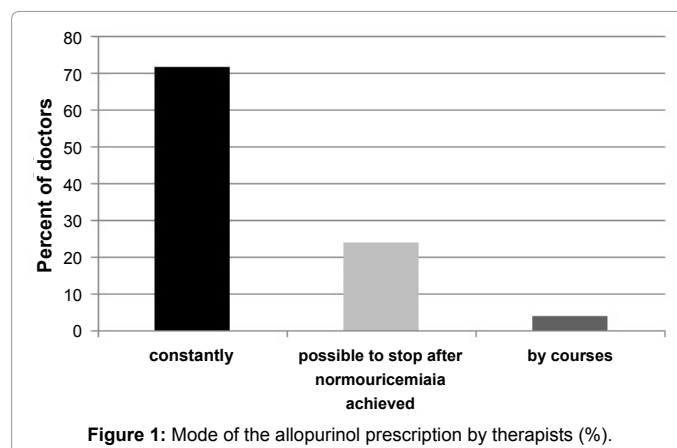
diagnostic criteria allowing the doctor to suspect and confirm existence of gout are of great value. Now, doctors use the classification criteria of Wallace (2000) approved by the WHO. Their purpose is early diagnosis of gout [17]. 62% of rheumatologists use Wallace criteria for diagnostics of gout. Among therapists, they are used by only 6% of the respondents.

Resistant hyperuricemia is an obligate risk factor of gout. Earlier, hyperuricemia was usually diagnosed at the level of the uric acid (UA) higher than 420 μmol/l. It is a point of super saturation of serum by uric acid when crystals start being formed. The contemporary position is to diagnose hyperuricemia at the level of uric acid higher than 360 μmol/l (6 mg/dl). It was indicated in the recommendations about diagnosis of gout by the European League against Rheumatism (EULAR) in 2006. This position is based on the results of a number of researches, which showed that the UA level higher than 360 μmol/l leads to a 4-fold increase of the risk of gout development in men and a 17-fold increase in women [17]. In our questionnaire, the correct value of the UA level was specified by 48% of rheumatologists and 24% of therapists.

Answering the question "What is "the gold standard" of gout diagnosis, 90% of rheumatologists, as well as 42% of therapists, specified identification of monosodium urate crystals by the method of polarizing microscopy. According to the recommendations of EULAR (2006), diagnostics of gout is possible via detection of monosodium urate crystals in the synovial liquid [14,17]. In our survey, 52% of therapists marked identification of hyperuricemia as "the gold standard". Though the hyperuricemia is also an obligate risk factor of gout, the UA serumal level isn't generally considered as the indicator excluding or confirming gout [22].

100% of therapists and 86% of rheumatologists specified impossibility of using a polarizing microscope at their workplaces. Unfortunately, quite few medical organizations of Russia have polarizing microscopes [2].

Conclusion

The results of our study confirm information about low awareness of gout among primary care doctors [23]. Despite the level of knowledge about gout among rheumatologists is higher, our study has revealed insufficient use of modern methods of diagnostics and treatment by doctors of both specialties. It has shown delusions in the questions of tactics of control over patients, which causes deterioration of their state and chronic gout. There is a need in measures aimed at improving the knowledge of classification criteria and modern clinical recommendations about the medical control of gout patients at the out-patient stage. For this purpose, it seems relevant to pay special attention

to studying the modern criteria of gout diagnostics and treatment at medical universities.

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