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Androgenic anabolic steroid use among male adolescents in Falkenberg

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Abstract Recent reports show that androgenic anabolic steroids are used by many teenagers, not as a deliberate attempt to give them strength, better athletic performance, etc., but to improve their looks. The so-called macho cult among young boys tempts them into using androgenic anabolic steroids to give them bigger muscles and a more powerful appearance.

This study was undertaken to investigate the prevalence of androgenic anabolic steroid use among teenagers in a small town and to create a platform for future work with the aim of decreasing the misuse of these drugs.

In Falkenberg, a town in the county of Halland in the west of Sweden, the pupils at two high schools were investigated by means of an anonymous multiple-choice questionnaire. A total of 1383 students (688 males and 695 females) aged 14–19 years participated in the study, giving a participation rate of 96%. The number of answers completed was 99%. The use of androgenic anabolic steroids is a reality among male teenagers in Falkenberg, with 5.8% of them using the drugs. Among 15- to 16-year-old boys misuse of these drugs is as high as 10%, and of these 50% (5.0% of total) also inject ampoules of the drugs. This prevalence is alarming since the adverse effects of androgenic anabolic steroids are more serious in teenagers. Serious action must be taken to inform teenagers of the consequences of misusing drugs.

Key words Androgenic anabolics, Drug misuse; male adolescents

Recent studies [1–5, 16] show an increasing problem with the misuse of androgenic anabolic steroids among male adolescents. In the 1950s top athletes started using the drugs, which has been and still is a big problem in different sports around the world [6, 7]. Ath-

letes use the drugs to give them more strength and speed, i.e., to improve their performance. However, during the 1990s teenage boys have started using these drugs to improve their appearance [4, 8], behaviour which has nothing to do with sports. Furthermore we know that androgenic anabolic steroids are associated with gymnastics and are used by many bodybuilders [9]. As a sports traumatologist, I have frequently met desperate young girls, who have had a relationship with a boy, whose character suddenly underwent a total change. He became aggressive and dangerous, suddenly starting to maltreat the girl. The only reason for this change in behaviour seemed to be his use of androgenic anabolic steroids [7, 10].

This was the background for my study. I have analysed what the teenagers know about androgenic anabolic steroids and how much they use them.

Materials and methods

The investigation of drug misuse among teenagers was made by means of an anonymous multiple-choice questionnaire distributed to high school students in Falkenberg. The study was part of a large lifestyle study in teenage girls and boys and was undertaken with the help of my colleague Gösta Eliasson. All students at two high schools in Falkenberg were given the questionnaire in February 1993. Falkenberg is a small town in Sweden with approximately 38 000 inhabitants. The schools investigated were Tångaskolan (pupils aged 14–16 years) and Gymnasieskolan (pupils aged 16–19 years). All social classes are represented in both high schools in the same proportions as found in the general population. The questionnaire was completed and returned by 1383 students (688 males, 695 females), giving the high participation rate of 96%. The proportion of answers completed was 99%! The misuse of androgenic anabolic steroids was ascertained by the following questions: "Have you ever eaten doping pills with muscle-stimulating and anabolic effects?" and "Have you ever injected anabolic steroids?" Both these questions were to be answered "yes" or "no." No questions were included to investigate the dosage of the drugs used.

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Results

The questionnaire to the students in Falkenberg shows that 1.0% of girls have used the drugs and that there is widespread use of pills and ampoules among male teenagers (Table 1). A total of 5.8% of male teenagers aged 14–19 years use or have used androgenic anabolic steroids. Nineteen-year-olds were recorded together with 18-year-olds. Drug misuse frequency among 15- to 16-year-old boys is the high figure of 10%, half of which (5.0%) had also injected ampoules of androgenic anabolic steroids. To verify the figures obtained students were given the question of whether they had a friend of the same age as themselves who uses or has used androgenic anabolic steroids. One in five boys knew of a drug-misusing friend his own age. When questioning the students as to whether or not they knew how to obtain the pills and ampoules, 52% knew that it was possible to buy them in Falkenberg and 14% knew exactly where to buy the pills and ampoules. Thirteen per cent of the girls and 16% of the boys had this direct knowledge. They also stated that it was possible to buy the pills and ampoules in their own school; this applied to both the schools investigated. As to their knowledge of androgenic anabolic steroids, one in five students thought that they were totally harmless. Most students (80%) did know that androgenic anabolic steroids sometimes make people aggressive, sterile and impotent. On the other hand, they were unaware of the adverse effects concerning, e.g. hair and skin trouble. This study shows that the main reason for the misuse of these drugs is not improvement of sports performance and that misuse of a mixture of drugs is common. The pupils who trained and competed in sports used less androgenic anabolic steroids than those who did not ($P < 0.05$). The boys who used or had used androgenic anabolic steroids also used tobacco, alcohol and hashish more than those who did not ($P < 0.001$).

Discussion

Recent studies have reported the frequency of the use of androgenic anabolic steroids among male adolescents to be between 5.3% [4] and 11% [2]. The usage of androgenic anabolic steroids is high in both urban and rural areas and the main reason for the misuse of these drugs is for the improvement of appearance [4].

There are an abundance of androgenic anabolic steroids on the black market in Sweden [11]. Customs officers estimate that they confiscate about 5% of what is available in Sweden, which gives a figure of 2800 kg pills and ampoules being smuggled into Sweden every year. Drug misuse among athletes has been described by the Swedish Association of Sports (RF), whose statistics [12] show that there are almost no cases of drug misuse among athletes in Sweden today except for among weightlifters.

Table 1 Frequency of the use of androgenic anabolic steroids among adolescents in Falkenberg

		Age (years)				
		14	15	16	17	18
Males						
Pills	No	2	6	14	8	10
	%	1.6	9.1	11	3.9	6.7
Ampuls	No	2	3	7	1	2
	%	1.6	4.5	5.3	0.48	1.3
Females						
Pills	No	2	1	0	3	1
	%	1.7	1.3	0.0	1.5	0.52
Ampuls	No	2	1	0	0	0
	%	1.7	1.3	0.0	0.0	0.0

Ten per cent of male adolescents aged 15 and 16 years use androgenic anabolic steroids and of these 50% also inject them. This means that severe drug misuse is found in 5% of boys of this age! Moreover, another 5% have used or use the drugs more or less frequently. This indicates that 350 boys of this age in the county of Halland use or have used steroid hormones. Male adolescents eat and inject the steroid hormones to improve their appearance and handsomeness and perhaps also for their psychological effects. The biochemical resources of today [13] make it possible to produce new androgenic anabolic steroids with less androgenic effects. If so, we have a new problem to take care of. Anonymous questionnaires are commonly used in prevalence studies such as this one. Recent studies [14, 15] have shown a significant amount of underreporting of the use of androgenic anabolic steroids. The frequency of use among male adolescents in this study in Falkenberg was reported to be 5.8%, which if this is less than the true figure means the prevalence of the misuse of androgenic anabolic steroids among these boys is even higher!

This study confirms that the misuse of androgenic anabolic steroids is a big problem for society. How can we prevent this drug misuse? Information for the education of adolescents is an important first step, but education is not enough [17, 18]. Scare tactics are also doomed to failure [19]. We must realise that teenage boys accept and even like risk-taking [8, 19], and some of the effects of drug-taking (euphoria, energy and sexual arousal) make them more confident and induce a positive mood [10]. The main reason for the misuse of androgenic anabolic steroids is to give an improvement in appearance [4, 8]. Today boys want muscles to give them a "macho look" because they think that girls like this [8]. On the other hand, girls display anorectic behaviour because they think that boys like them to be thin. We need to discuss their ideals and lifestyle. With discussion relevant to the issues facing teenagers we can improve their quality of life. At the same time we can make considerable financial savings for the community and avoid many tragedies.

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