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HISTORICAL ASPECTS OF DOPING AND ANTI-DOPING IN SPORT**Abstract**

The use of doping is not a recent phenomenon. In the light of the story about sport in ancient and classical Greece, no wonder that advanced Doctor Galen talked about the use of stimulants. Numerous historical sources confirmed that the soldiers and the winners of the ancient Olympic Games (Savic, 2008) in the period before New Era used various herbal extractors that physical strength and endurance raised their level of combat readiness, increased attention and provoked emotional irritability. The tradition of the use of the stimulants showed its new face in modern history in the field of sport where the desire to achieve sporting success brought together the work of athletes, doctors, coaches and pharmacists. From the modern era comes many stories about famous tragedies, such as the collapse of American marathon runner Thomas Hicks at the Olympic Games in St. Louis in 1904 and the death of Danish cyclist Jensen at the Olympic Games in Rome in 1960. In the 1950s of 20th century, American and Soviet athletes widely used steroid component known as Dianabol. Some people claimed that this was the explanation for the "irregular results" at the Olympic Games in Rome in 1960, after which was increasingly known how steroids can be useful. "From the next Olympic Games until those Olympic Games late in 1980s of the 20th century, there was a real craze for using illegal drugs, that was never seen before and never late. If for no other reason than because there was no adequate methods to detect the presence of these substances (Luschen, 2000). Whit spectacular disqualification of athletes began just in 1980s of 20th century; In 1983 nineteen athletes were denied participation in the Pan American Games, Canadian Ben Johnson was disqualified at the Olympic Games in Seoul in 1988 and German Katrin Crabs ahead of the Olympic in Barcelona in 1992.

Key words: *Doping, Anti-doping, stimulants*

1. INTRODUCTION

In the 1960s of 20th century, the use of substances and concern about the "doping" in professional sports at the highest level have become commonplace. The most common arguments against the use of drugs that cause greater physical abilities in the sport are as follows: it is unfair to bring into danger the health of athletes who use them and that it undermines the

integrity of the sport. That these are not the only arguments showed campaigns that the top athletes are encouraged not to use illegal drugs because they are not only athletes, but also role models for young people. Doping is considered as a giving of pharmacological or physiological quantities or concentrations that raise physical ability and reduces fatigue of athletes in order to achieve better results. No one has claimed that the drug can increase physical abilities, but despite of that in 1990s elite athletes were no longer allowed to enjoy this drug. In 1990, IOC (International Olympic Committee) has not put marijuana on the list of banned substances, but it is ranked among the substances whose use must “impose certain restriction”; it was estimated that it “harms young people and threat to world peace” (Waddington, 2000). Athletes in the UK has tested for marijuana since 1990, and they uses a system of doping controls managed by Sports Council and that institution noted with concern that during the entire decade of the 20th century ruled increase in the use of narcotics.

2. METHOD

In this paper dominates comparative descriptive method of research of domestic and foreign authors who have dealt with similar themes.

The problem of doping in sport and necessity to work constantly on its suppression were quickly reorganized in these areas. Long before the formation of Anti-Doping Agency as an institutionalized fight against doping, the authors indicated the harmfulness of doping by the written word. The first publications written about the use of doping in sport appeared in 1970s and 1980s (Ostojic 1986) the first publication in this area, which dealt with the problem of doping in elite, but also in nonprofessional sport, was the monograph “Doping and Sport” whose authors were professor Dr Dragoljub Jovanovic and doctor Dragan Radovanovic. The reason that explains why the issue of doping premium and non-professional athletes is significant is the growing percentage of those who use doping agents (ACC) Androgenic-anabolic steroids. Kanayama and colleagues in 2001 explored the use of anabolic agents on a random sample of five gyms and found that 35% of the population used anabolic steroids. In the same survey when they have seen only the male population, that percentage was 5.4 (Jovanovic and Radovanovic, 2001) conducted investigation whose sample consisted 363 recreational bodybuilders and testing was anonymous and voluntary. The results indicate that 23.5% of professional bodybuilders used anabolic androgenic steroids at least once. The extra weight gives the data of age-doping that says that among young athletes between 10 and 15 years the percentage of 0.7% and that the first contact with the Androgen-anabolic steroids (ACC) usually occurs between 12 and 13 years. The significant of this problem is based on several effects caused by the uncontrolled use of a large number of doping substances and a large growing number of non-professional athletes who use doping. Some authors (Erhangborg and Rosen 2009) believe that they are generally three types of users of doping primarily anabolic steroids: *athletes, estate and criminals*.

The aim is chronological overview (Table 1.1 and 1.2) displays a brief overview about doping and key events in the development of the fight against doping in sport. Table 1.1. lists some of the most important substances and prohibited methods that are listed in the IOC then their use in medicine, alleged benefits that athletes can use of these substances and

side effects. The key events in the development of anti-doping from the Olympic Games in Rome in 1960 to Sydney are listed in table 1.

3. RESULTS

Table 1.1. List of the most abundant substances and prohibited methods based on the data of the IOC: medical procedures, benefits in Sport and side effects.

<i>Substances and prohibited methods</i>	<i>Medical benefits</i>	<i>Alleged benefits for athletes</i>	<i>Some side of effects</i>
Stimulants: amphetamine	Removes mild depression	Used to increase aggression in sport, eg. American football: to increase the strength in sports that require endurance in cycling: appetite suppressant in sports that body mass is very important, eg. judo	Dependent: can cause loss of judgement, psychotic behavior anorexia and insomnia
Narcotic: Cocaine	Powerful anesthetic	It uses as an anesthetic	Dependence and loss of judgment when we talk about injuries
Anabolic agents: anabolic androgenic steroids	Favors the development of youth in puberty; used for anemia, abnormal kidney function and treatment of burns	Increases strength and body mass, help athletes to refresh themselves after training and to train more intensively, increasing aggressiveness	Males including a reduction of the testes and affect the development of the breast tissue. Women: provoke characteristics peculiar to men, including and deepening of the voice and growth of facial hair. Both men and women: causes increases in aggression and depression
Diuretics	Regulate fluid retention and high blood pressure	They are used to eject other drugs and to achieve body weight in sports where this is important	Dehydration a possible risk of muscle, spasms and muscle strength decrease
The peptides, glycoprotein, hormones and their related compounds, eg. Human growth Hormone	Human growth hormone uses for defective children	It assists the growth and development of muscle mass. Suppresses fats accumulation. Strengthens tendons (it is the way to lead one of the problems caused by the use of steroids)	Excessive bone growth such as the face and forehead. Risk of infection caused by contaminated needles because this drug gives intravenously
Synthetic erythropoietin EPO	EPO uses in the treatment of anemia and kidney	Increase the number of red blood cells which increases oxygen flow in the body	Increases blood pressure, risk of thrombosis and heart attack
Prohibited methods: Pharmacological, chemical and physical manipulation	This category covers a wide range of activities including manipulation of urine sample, eg.: alcohol and catheterization when the urine without chemical substances is injected into the bladder in order to obtain a "clean" sample refusal to take a sample of renal excretion.		

Table 2.1. All significant events in the development of anti-doping

<i>Year/Years</i>	<i>EVENTS</i>
1960.	Knud Jensen's death at the Olympic Games in Rome
1961.	IOC established the Medical commission
1962.	The IOC adopted a resolution condemning doping
1963.	Congress of International federation of the piece is worded definition of doping
Mid 1960s	International Cycling Union introduced doping test
1964.	France and Belgium were first introduced legislation to prohibit doping in sport
1966.	Five top cyclist in the world cycling championship refused to give a urine sample
	FIFA introduced doping tests at the world championship in England
1968.	IOC conducted testing both at the summer and winter Olympic Games
1970.	Testing was introduced at Commonwealth Games
1971.	IOC published the first list of prohibited substances and methods
1972.	IOC did more than 2000 tests at the Olympic Games in Munich
	Introduced first testing for anabolic steroids
	The International Amateur Athletic Federation was founded Doctor's commission
1974.	Testing conducted on athletic Championship in Athletics
1976.	At the Olympic Games tests for the detection of anabolic steroids was first used in Montreal
	IOC introduced laboratory accreditation
1977.	For the first time testing was applied uot of competition
1978.	Federation agreed on partial about compliance penalties
	The Council of Europe formulated a recommendation in connection with doping and sent to the Member States
The end of 1970. and 1980.	A member of international conferences that was prepared to exchange information and discuss common problems
1981.	At the 11 th Olympic Congress in Baden-Baden was adopted a resolution which athletes used to support the fight of the IOC Anti-Doping
Start of 1980.	The development of sensitive testing method based on gas chromatography/mass spectrometry (GH/SM)
1983.	A large number of athletes canceled their participation in the pan American Games when it was announced that (GH/SM) will be used for test
1988.	Canadian Ben Johnson, winner of the Olympic finals in the 100m race was positive when he was tasted for steroids
1989.	The International Amateur Athletic Federation established a "flying raids" made up of officials for doping control whose task was to conduct unannounced testing out of competition especially for steroids
	The Anti-Doping convention was published by The Council of Europe
The end of 1980.	In Germany began series of trials which revealed the extent of how much doping conducted under the auspices of state in the former East Germany
1998.	Almost canceled Tour the France because of drugs that was seized by customs officers and investigation that followed
1999.	At the conference against doping that was held in Lausanne, global campaign against doping was suggested
2000.	The World agency for the fight against doping made 2500 tests during the Sydney Olympic Games
2003.	Banned genetic doping; The Second World Conference about doping was held in Copenhagen;
	The World Anti-Doping Code was adopted
2005.	International Convention against Doping in Sport was adopted by the UNESCO

This story will never have an end, not only because the future is unpredictable, but because the past constantly reconstructs. It all began in 1988, a dramatic discovery that Ben Johnson was positive on a doping test, of which the greatest benefit had chatty and devout American Carl Lewis, who also used illegal means, but it was covered up. Later, the third in that race, Briton Langford Christie was disqualified for using illegal substances. The same fate for the same offense, hit a series of American athletes that were brought in connection with Victor Korneja and his Balko Laboratory in California and also in the whole story was involved a recorder in the 100m race Tim Montgomery, while his partner, triple Olympic champion Marion Jones was under investigation. Perhaps we are facing with a new twist in a fierce battle of two technologies-technologies for detection of illicit substances. According to some sources, gene doping, which is impossible to detect, can be the next form of high-tech cheating which will affect sport.

Gene therapy, which will soon begin to be applied to people which suffering from muscular dystrophy, suggests that it will be possible to rebuild the muscles that withered away due to old age or illness. "Unfortunately" says Sweeney, it will be a "dream come true" for athletes inclined to doping. Chemical substances will be created and there will not be difference between these substances and natural products and that will be created in the muscle tissue. Outwardly nothing will enter in the bloodstream and officials will have nothing to disclose testing blood or urine. World agency for the fight against doping has already asked scientists to find a way to disable that gene therapy becomes the newest form of doping. However, since these treatments have become the eventually enter into widespread use, disabling athletes access to such technology will be practically impossible. (Sweeney 2004).

Sweeney wonders whether one day we will all become genetically modified athletes or we will just keep on it to improve health of the whole population using genetic transfer. Such things that endangered our idea of human nature they have hardly started to become public into the focus of public interest, especially in the US where the market forces were restrained at least.

4. CONCLUSION

In the end, it will be useful if we devote attention to the generally accepted claims that doping is unfair, that harms athletes and undermines the integrity of sport. The claim that doping is something unfair comes from distinguishing between fair and unfair advantages. However, it is clear that athletes enter in the competition with a different physiological and psychological attributes and that it is not considered as unfair, perhaps that these differences are natural. Although some sports have specific categories, such as boxing and judo, in which athletes are sorted by weight, at most sports such categories do not exist. If natural advantages gained by birth and/or by training acceptable, what we can say about "unnatural" benefits in the form of swimming suits that significantly reduce the level of friction, ultra light bicycles or modern engines in the cars of "Formula 1" such as some substances, neither of these things are an integral part of the body of athletes, but unlike substances they are accepted in many sports. Perhaps the best measure is that advantage permanent or limited: it seems that the new shape of aerodynamic spears be accepted, but only in event that such spears can get

athletes form all over the world. Would it be all right to use certain substances if they would be equally available to all athletes? It seems that there are few of those who would accept such a rationalization of substance use. Another possibility is that there is no matter whether it is natural or unnatural advantage, nor is it equally available to everybody, but how it was acquired. Compare, for example, the athlete who trains at high altitude, thereby increasing the capacity of his blood to carry oxygen, and the athlete who achieves the same effect using a synthetic substance called erythropoietin. However, state covers the costs for the first athlete, while the other comes from developing countries that does not have means for that.

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