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Analytical study of doping cases of banned substances during Olympics games from 1968 to 2012

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Abstract

The purpose of the present study was to explore and analyse the doping cases of banned substances during Olympic games from 1968 to 2012. Data was collected through primary and secondary sources. These sources were from published material and reports of International Olympic Committee, World Anti Doping Agency (2008), IOC Medical Commission, reference books. National Anti Doping Agency (2015). Newspapers, Internet Sources, web sites and published materials in text books. To find out the doping cases during Olympics games, data was framed in tabular form and percentage analysis was performed. The results of the study revealed that the more number of players from United States were found under the influence of performance enhancing drugs during Olympics games. Greater number of weightlifters and athletic players were caught in testing of banned drugs during Olympics games. Individual game players were found more prompt towards the performance enhancing drugs than team and combat games during Olympics games. From different country of world. All medal winner player from different country of world were found to have an illegal tendency by using of performance enhancing banned drugs. A single player was not found under the influence of performance enhancing drugs during Moscow Olympics games in 1980. Whereas, greater number of players were found under the influence of performance enhancing drugs 2004 Athens Olympics games than other Olympics games

Keywords: Analytical study, doping cases, substances during, Olympics games

1. Introduction

The word doping is probably derived from the Dutch word dop, the name of an alcoholic beverage made of grape skins used by Zulu warriors in order to enhance their prowess in battle. In competitive sports, doping refers to the use of banned athletic performance-enhancing drugs by athletic competitors, where the term doping is widely used by organizations that regulate sporting competitions. The use of drugs to enhance performance is considered illegal by most of the international sports federations, including the International Olympic Committee. The term became popular in 20th century.

Thomas Hicks, was the winner of the 1904 marathon. He was given strychnine and brandy by his coach during the race. The use of this performance-enhancing medication has also been attributed to one death during Olympic competition (WADA, 2008) [18].

Rome Olympic Games in 1960. Danish cyclist- Knud Enemark Jensen fell from his bicycle during the cycling road race, and later he died. A medical test found that he was under the influence of amphetamine caused him to lose consciousness during the race. In the mid-1960, sports federations were started to ban the use of performance enhancing drugs. (Begley, 2008) [2]. In 1966 century, Union Cycliste Internationale and Federation Internationale de Football Association introduced the doping tests during world championships. In 1967, International Olympic Commission (IOC) instituted its Medical Commission and banned the use of performance-enhancing drugs in Olympic competition. Medical commission set up the first list of prohibited substances (Mottram, 2012) [12]. The IOC introduced the first drug use controls at the 1968 in winter Olympics. Drug tests were first introduced at the Olympic Winter Games in Grenoble and Olympic Games in Mexico (1968). Hans-Gunnar Liljenwall, a Swedish pentathlete was first who was positive for the use of performance enhancing drugs. He lost his bronze medal for alcohol use (explore.com. 2008) [11].

Anti-doping war started shifting rapidly toward the blood doping. The re-infusion of the athlete's blood in order to increase the level of oxygen-carrying hemoglobin has been practiced

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since the 1970 century. The American cyclist Pat McDonough admitted to blood doping at the 1984 Olympic games in Los Angeles. Following the games it was revealed that one-third of the U.S. cycling team had received blood transfusions before the games. Blood doping was banned by the IOC in 1985 and as a method in 1986. Canadian sprinter Ben Johnson, who won the Men's 100 meters at the Seoul Olympics games (1988), but tested positive for stanozolol. His gold medal was subsequently awarded to runner-up Carl Lewis (WADA, 1999) [16]. Erythropoietin (EPO) from blood re-fusion was included in the list of prohibited substances in 1990 by IOC. Testing of athletes for performance-enhancing drugs includes both urine and blood tests.

World Anti-Doping Agency (WADA) was established on November 10, 1999 to test the performance-enhancing drugs. An EPO detection test was first implemented at the Sydney Olympic Games in 2000 by World Anti-Doping Agency. During the Beijing games (2008), 3,667 athletes were tested by the IOC under the auspices of the World Anti-Doping Agency. Both urine and blood testing was used in a coordinated effort to detect banned substances and recent blood transfusions. Six athletes failed drug tests while in competition in Beijing (WADA, 2008) [18].

In, 2012 London Olympics games, 15 player of different countries belong to athletics, weightlifting, Judo, Rowing, Cycling, Gymnastics and Wrestling were detected positive in performance enhancing drugs by WADA. So, the purpose of the present study was to explore and analyse the doping cases

of banned substances during Olympic games from 1968 to 2012.

2. Methodology

2.1 Sources of Data

Keeping in the view of the study, data was collected through primary and secondary sources. Primary sources related to study were from published material and reports of International Olympic Committee, World Anti Doping Agency (2008), IOC Medical Commission, reference books. National Anti Doping Agency (2015). Secondary sources related to study were from News papers, Internet Sources, web sites, published materials in text books etc.

2.2 Statistical Analysis

To find out the doping cases during Olympics games from 1968 to 2012, data was framed in tabular form as consolidated statistics of doping cases. From these raw data, percentage was calculated of doping cases in tabular form as Game-wise, Year-wise, Type of sport-wise, Country-wise for participants and medal winner of Olympics games during 1968 to 2012

3. Results and Discussion

To assess and explore the doping cases of banned drugs during Olympic games, percentage was computed from collected data and results pertaining to this have been presented from Table 1 to 8

Table 1: Consolidated Statistics of Doping Cases of Banned Drugs Taken By Players of Different Games and Sports during Olympic Games from 1968 To 2012

Year	Place	Name	Country	Sport	Banned Substance	Medal
1968	Mexico City	Hans-Gunnar Liljenwall	Sweden	M. pentathlon	Ethanol	Bronze
1972	Munich	Bakaava Buidaa	Mongolia	Judo	Caffeine	Silver
		Miguel Coll	Puerto Rico	Basketball	Ephedrine	
		Rick DeMont	United States	Swimming	Ephedrine	Gold
		Jaime Huélamo	Spain	Cycling	Coramine	Bronze
		Walter Legel	Austria	Weightlifting	Amphetamine	
		Mohammad Reza Nasehi	Iran	Weightlifting	Ephedrine	
		Aad van den Hoek	Netherlands	Cycling	Coramine	Bronze
1976	Montreal	Blagoi Blagoev	Bulgaria	Weightlifting	Anabolic steroid	Silver
		Mark Cameron	United States	Weightlifting	Anabolic steroid	
		Paul Cerutti	Monaco	Shooting	Amphetamine	
		Dragomir Ciorosian	Romania	Weightlifting	Fencamfamine	
		Philippe Grippaldi	United States	Weightlifting	Anabolic steroid	
		Zbigniew Kaczmarek	Poland	Weightlifting	Anabolic steroid	Gold
		Valentin Khristov	Bulgaria	Weightlifting	Anabolic steroid	Gold
		Lorne Liebel	Canada	Sailing	Phenyl-propanolamine	
		Arne Norrback	Sweden	Weightlifting	Anabolic steroid	
		Peter Pavlasek	Czechoslovakia	Weightlifting	Anabolic steroid	
		Danuta Rosani	Poland	Athletics	Anabolic steroid	
1980	Moscow	-----	-----	-----	-----	----
1984	Los Angeles	Serafim Grammatikopoulos	Greece	Weightlifting	Nandrolone	
		Vésteinn Hafsteinsson	Iceland	Athletics	Nandrolone	
		Tomas Johansson	Sweden	Wrestling	Methenolone	Silver
		Stefan Laggner	Austria	Weightlifting	Nandrolone	
		Göran Pettersson	Sweden	Weightlifting	Nandrolone	
		Eiji Shimomura	Japan	Volleyball	Testosterone	
		Mikiyasu Tanaka	Japan	Volleyball	Ephedrine	
		Ahmed Tarbi	Algeria	Weightlifting	Nandrolone	
		Mahmud Tarha	Lebanon	Weightlifting	Nandrolone	
		Gianpaolo Urlando	Italy	Athletics	Testosterone	
		Martti Vainio	Finland	Athletics	Methenolone	Silver
		Anna Verouli	Greece	Athletics	Nandrolone	
1988	Seoul	Alidad	Afghanistan	Wrestling	Furosemide	
		Kerrith Brown	Great Britain	Judo	Furosemide	
		Kalman Csengeri	Hungary	Weightlifting	Stanozolol	

		Mitko Grablev	Bulgaria	Weightlifting	Furosemide	Gold
		Angell Guenchev	Bulgaria	Weightlifting	Furosemide	Gold
		Ben Johnson	Canada	Athletics	Stanozolol	Gold
		Fernando Mariaca	Spain	Weightlifting	Pemoline	
		Jorge Quesada	Spain	Modern pentathlon	Propranolol	
		Andor Szanyi	Hungary	Weightlifting	Stanozolol	Silver
		Alexander Watson	Australia	M. Pentathlon	Caffeine	
1992	Barcelona	Madina Biktagirova	Unified Team	Athletics	Norephedrine	
		Wu Dan	China	Volleyball	Strychnine	
		Bonnie Dasse	United States	Athletics	Clenbuterol	
		Jud Logan	United States	Athletics	Clenbuterol	
		Nijolė Medvedeva	Lithuania	Athletics	Meziorcarde	
1996	Atlanta	Iva Prandzheva	Bulgaria	Athletics	Methandienone	
		Natalya Shekhodanova	Russia	Athletics	Stanozolol	
2000	Sydney	Fritz Aanes	Norway	Wrestling	Norandrosterone and noretiocholanolone	
		Ashot Danielyan	Armenia	Weightlifting	Stanozolol	Bronze
		Izabela Dragneva	Bulgaria	Weightlifting	Furosemide	Gold
		Stian Grimseth	Norway	Weightlifting	Nandrolone	
		Ivan Ivanov	Bulgaria	Weightlifting	Furosemide	Silver
		Marion Jones	United States	Athletics	THG	3 Gold 2Bronze
		Alexander Leipold	Germany	Wrestling	Nandrolone	Gold
		Sevdalin Minchev	Bulgaria	Weightlifting	Furosemide	Bronze
		Antonio Pettigrew	United States	Athletics	EPO and HGH	Gold
		Oyuunbilegiin Pürevbaatar	Mongolia	Wrestling	Furosemide	
		Andreea Răducan	Romania	Gymnastics	Pseudoephedrine	Gold
		Andris Reinholds	Latvia	Rowing	Nandrolone	
		Jerome Young	United States	Athletics	Nandrolone	Gold
2004	Athence	Wafa Ammouri	Morocco	Weightlifting	Anabolic steroid	
		Adrián Annus	Hungary	Athletics	Falsified test result	Gold
		Ludger Beerbaum	Germany	Equestrian	Betamethasone	Gold
		Yuriy Bilonog	Ukraine	Athletics	Oxandrolone	Gold
		Andrew Brack	Greece	Baseball	Stanozolol	
		Viktor Chislean	Moldova	Weightlifting	Anabolic steroid	
		Crystal Cox	United States	Athletics	Anabolic steroid	Gold
		Róbert Fazekas	Hungary	Athletics	Missed the test	Gold
		Mabel Fonseca	Puerto Rico	Wrestling	Stanozolol	
		Anton Galkin	Russia	Athletics	Stanozolol	
		Ferenc Gyurkovics	Hungary	Weightlifting	Oxandrolone	Silver
		Tyler Hamilton	United States	Cycling	Blood doping	Gold
		Zoltan Kecskes	Hungary	Weightlifting	Anabolic steroid	
		Albina Khomic	Russia	Weightlifting	Testosterone	
		Aye Khine Nan	Myanmar	Weightlifting	Anabolic steroid	
		Irina Korzhanenko	Russia	Athletics	Stanozolol	Gold
		Zoltán Kovács	Hungary	Weightlifting	Missed the test	
		Svetlana Krivelyova	Russia	Athletics	Oxandrolone	Bronze
		Pratima Kumari Na	India	Weightlifting	Anabolic steroid	
		Aleksey Lesnichiy	Belarus	Athletics	Clenbuterol	
		David Munyasia	Kenya	Boxing	Cathine	
		Derek Nicholson	Greece	Baseball	Diuretic	
2004	Athens	Oleg Perepetchenov	Russia	Weightlifting	Clenbuterol	Bronze
		Leonidas Sampanis	Greece	Weightlifting	Testosterone	Bronze
		Thinbajjam Sanamcha Chanu	India	Weightlifting	Furosemide	
		Mital Sharipov	Kyrgyzstan	Weightlifting	Furosemide	
		Olga Shchukina	Uzbekistan	Athletics	Clenbuterol	
		Sahbaz Sule	Turkey	Weightlifting	Anabolic steroid	
		Ekaterini Thanou	Greece	Athletics	Missed the test	
		Ivan Tsikhan	Belarus	Athletics	Methandienone	Silver)
		Irina Yatchenko	Belarus	Athletics	Methandienone	Bronze
2008	Beijing	Christian Ahlmann	Germany	Equestrian	Capsaicin	
		Bernardo Alves	Brazil	Equestrian	Capsaicin	
		Lyudmila Blonska	Ukraine	Athletics	Methyltestosterone	silver
		Fani Halkia	Greece	Athletics	Methyltrienolone	
		Tony André Hansen	Norway	Equestrian	Capsaicin	Bronze
		Kim Jong-su	North Korea	Shooting	Propranolol	1Bronze 1 Silver
		Courtney King	United States	Equestrian	Felbinac	
		Denis Lynch	Ireland	Equestrian	Capsaicin	

		Maria Isabel Moreno	Spain	Cycling	Erythropoietin	
		Vanja Perisic	Croatia	Athletics	CERA	
		Rodrigo Pessoa	Brazil	Equestrian	Nonivamide	
		Rashid Ramzi	Bahrain	Athletics	CERA	Gold
		Igor Razoronov	Ukraine	Weightlifting	Nandrolone	
		Davide Rebellin	Italy	Cycling	CERA	Silver
		Stefan Schumacher	Germany	Cycling	CERA	
		Adam Seroczyński	Poland	Canoeing	Clenbuterol	
		Do Thi Ngan Thuong	Vietnam	Gymnastics	Furosemide	
		Athanasia Tsoumeleka	Greece	Athletics	CERA	
2012	London	Ghfran Almouhamad	Syria	Athletics	Methylhexaneamine	
		Victoria Baranova	Russia	Cycling	Male hormone testosterone ¹	
		Kissya Cataldo	Brazil	Rowing	EPO	
		Nicholas Delpopolo	United States	Judo	Cannabis	
		Luiza Galiulina	Uzbekistan	Gymnastics	Furosemide	
		Hassan Hirt	France	Athletics	EPO	
		Amine Laâlou	Morocco	Athletics	Furosemide	
		Marina Marghiev	Moldova	Athletics	Furosemide	
		Nadzeya Ostapchuk	Belarus	Athletics	Methenolone	Gold
		Diego Palomeque	Colombia	Athletics	Exogenous testosterone	
		Darya Pishchalnikova	Russia	Athletics	Oxandrolone	Silver
		Hysen Pulaku	Albania	Weightlifting	Stanozolol	
		Alex Schwazer	Italy	Athletics	EPO	
		Soslan Tigiev	Uzbekistan	Wrestling	Methylhexaneamine	Bronze
		Tameka Williams	Saint Kitts and Nevis	Athletics	"Blast Off Red"	

Table 2: Countrywise Percentage Indication of Doping Cases of Athletes in Olympic Games from 1968 To 2012

S. NO.	Country	Number of Players Caught in Doping	Percentage (%)
1	Australia	1	00.79
2	Algeria	1	00.79
3	Armenia	1	00.79
4	Australia	2	01.58
5	Afghanistan	1	00.79
6	Albania	1	00.79
7	Bulgaria	8	06.34
8	Belarus	4	03.17
9	Bahrain	1	00.79
10	Brazil	3	02.38
11	Canada	2	01.58
12	Czechoslovakia	1	00.79
13	China	1	00.79
14	Croatia	1	00.79
15	Columbia	1	00.79
16	Finland	1	00.79
17	France	1	00.79
18	Greece	8	06.34
19	Great Britain	1	00.79
20	Germany	4	03.17
21	Hungary	7	05.55
22	India	2	01.58
23	Iran	1	00.79
24	Iceland	2	01.58
25	Italy	3	02.38
26	Japan	2	01.58
27	Kenya	1	00.79
28	Kyrgyzstan	1	00.79
29	Lebanon	1	00.79
30	Lithuania	1	00.79
31	Latvia	1	00.79
32	Magnolia	2	01.58
33	Monaco	1	00.79
34	Morocco	2	01.58
35	Myanmar	1	00.79
36	Moldova	2	01.58
37	Norway	2	01.58
38	North Korea	1	00.79
39	Nevis	1	00.79
40	Netherlands	1	00.79
41	Poland	3	02.38
42	Puerto Rico	2	01.58
43	Romania	2	01.58

44	Russia	8	06.34
45	Sweden	4	03.17
46	Spain	4	03.17
47	Syria	1	00.79
48	Turkey	1	00.79
49	Ukraine	4	03.17
50	United States	13	10.32
51	Uzbekistan	3	02.38
	Total	126	

Summary of Table 2

S. No.	Number of Country	Percentage of Country (%)	Total Players	Frequency and Percentage of Players Caught in doping from each Country
1.	26	50.98	26	01(0.79%)
2.	11	21.58	22	02(1.58%)
3.	04	07.84	12	03(2.38%)
4.	05	09.80	20	04(3.17%)
5..	01	01.96	07	07(5.55%)
6.	03	05.88	24	08(6.34%)
7.	01	01.96	13	13(10.32%)
	51	100%	126	

Table 2 indicates that 0.79% players (01 players from each 26 Country) were found under the influence of performance enhancing drugs followed by 1.58% (02 players from each 11 Country), 2.38% (03 players from each 04 Country, 3.17% (04 players from each 05 Country), 5.55% (07 players from 01 Country), 6.34% (08 players from each 03 Country) and 10.32% (13 players from 01 Country) during Olympic games from 1968 to 2012.

Table 3: Game wise Percentage Indication of Doping Cases of Athletes in Olympic Games from 1968 to 2012

S. No.	Sport/Game	Number of Players Caught in Doping	Percentage (%)	Type of Sport/Game
1.	Athletics	42	33.33	Individual
2.	Boxing	01	00.79	Individual
3.	Basketball	01	00.79	Team
4.	Baseball	02	01.60	Team
5.	Canoeing	01	00.79	Team
6.	Cycling	07	05.55	Individual
7.	Equestrian	07	05.55	Individual
8.	Gymnastics	03	02.38	Individual
9.	Judo	03	02.38	Individual
10.	Modern Pentathlon	03	02.38	Individual
11.	Rowing	02	01.60	Individual
12.	Sailing	01	00.79	Individual
13.	Swimming	01	00.79	Individual
14.	Shooting	02	01.60	Individual
15.	Volleyball	03	02.38	Team
16.	Wrestling	07	05.55	Individual
17.	Weightlifting	40	31.75	Individual
	Total	126	100%	

Table 3 indicates that the 33.33% player of athletics were caught under the influence of performance enhancing drugs followed by 31.75% (weightlifting), 5.55% (Cycling, Equestrian, and wrestling), 2.38% (Gymnastics, Judo and Modern Pentathlon), 1.60% (Shooting, Rowing, Baseball) and 0.79% (Boxing, Basketball, Canoeing, Sailing and Swimming). All these players of different sports and games were found to use the banned drugs during Olympics games from 1968 to 2012 held in different country of world.

Table 4: Year wise Percentage Indication of Doping Cases of Players in Olympic Games from 1968 TO 2012

Year	Place of Competition	Number of Players Caught in Doping	Percentage (%)
1968	Mexico City	01	00.79
1972	Munich	07	05.55
1976	Montreal	11	08.73
1980	Moscow	00	00.00
1984	Los Angeles	12	09.53
1988	Seoul	10	07.94
1992	Barcelona	05	03.97
1996	Atlanta	02	01.58
2000	Sydney	13	10.32
2004	Athens	32	25.41
2008	Beijing	18	14.28
2012	London	15	11.90
	Total	126	100%

Table 4 indicates that only one player (0.79%) was caught under the influence of performance enhancing drugs in 1968 Mexico Olympic games followed by 1972 (5.55%), 1976 (8.73%), 1980 (00.00%), 1984 (9.53%), 1988 (7.94%), 1992 (3.97%), 1996 (1.58%), 2000 (10.32%), 2004 (25.41%), 2008 (14.28%) and 2012 (11.90%) All these players were used the banned drugs during Olympics games from 1968 to 2012.

Table 5: Sport Type wise Percentage Indication of Doping Cases of Athletes in Olympic Games from 1968 TO 2012

S. No.	Type of Sport/Game	Number of Players Caught in Doping	Percentage (%)
1.	Individual	108	85.71
2.	Combat	11	08.73
3.	Team	07	05.56
	Total	126	100%

It is clearly evident from Table 5 that the 85.71% players were caught under the influence of performance enhancing drugs of individual games followed by combat game (8.73%) and team games (5.56%). All these players of different sports and games were found to use the banned drugs during Olympics games from 1968 to 2012 held in different country of world.

Table 6: Percentage Indication of Doping Cases of Medal Winner Players in Olympic Games from 1968 TO 2012

S. No.	Type of Medal	Number of players Caught in Doping	Percentage (%)
1.	Gold	21	47.68
2.	Silver	12	25.53
3.	Bronze	14	29.79
	Total	47	100%

It is evident from Table 6 that the 47.68% gold medal winner players were caught under the influence of performance enhancing drugs followed by silver medal winner (25.53%) and bronze medal winner (29.79%). All these medal winner players of different sports and games were have taken banned drugs during Olympics games from 1968 to 2012 held in different country of world.

Table 7: Indication of Banned Drugs Doped By players in Olympic Games from 1968 TO 2012

S. No.	Sport/Game	Most Common Medicated Drugs
1.	Athletics	Anabolic Steroids, Nandrolone, Testosterone, Methenolone, Stanozolol, Norephedrine, Clenbuterol, Meziocande, Methandienone, THG, EPO, HGH, Falsified test result, Oxandrolone, Methandienone, Methyltestosterone, CERA, Methylhexaneamine, Furosemide, Exogenous, Blast off Red.
2.	Boxing	Cathine
3.	Basketball	Ephedrine
4.	Baseball	Diuretic, Stanozolol,
5.	Canoeing	Clenbuterol
6.	Cycling	Coramine, Blood doping, Erythropoietin, Cera, Malenormone, Testosterone
7.	Equestrian	Betamethasone, Capsaicin, Felbinac, Nonivamide.
8.	Gymnastics	Furosemide, Pseudoephedrine
9.	Judo	Caffeine, Cannabis, Furosemide
10.	Modern Pentathlon	Caffeine, Ethanol, Propranolol
11.	Rowing	Nandrolone, EPO
12.	Sailing	Phenylpropanolamine
13.	Swimming	Ephedrine
14.	Shooting	Amphetamine, Propranolol
15.	Volleyball	Testosterone, Ephedrine, Strychnine
16.	Wrestling	Methenolone, Furosemide, Norandrosterone, Nandrolone
17.	Weightlifting	Amphetamine, Ephedrine, Anabolic Steroids, Fencamfamine, Nandrolone, Stanozolol, Furosemide, Pemoline, Oxandrolone, Testosterone, Clenbuterol

Table 7 indicates that the players of different games and sports belong to different country of world during were found under influence of most common performance enhancing banned drugs during Olympics games from 1968 to 2012 i.e. Anabolic Steroids Furosemide, Nandrolone, Stanozolol, Clenbuterol, CERA Ephedrine, Testosterone, Capsaicin, EPO, Oxandrolone, Caffeine, Amphetamine, Methenolone, Methandienone, and Methylhexane amine. All these drugs were banned during Olympics games.

Table 8: Indication of Most Common Drugs Medicated by Athletes in Olympic Games from 1968 TO 2012

S. No.	Doping of Banned Drugs (N=48)	Number of Players (N=126)	Percentage (%)
1.	Anabolic Steroids	15	11.90
2.	Furosemide	14	11.11
3.	Nandrolone	12	09.52
4.	Stanozolol	10	07.94
5.	Clenbuterol	06	04.76
6.	CERA	05	03.97
7.	Ephedrine	04	03.17
8.	Testosterone	04	03.17
9.	Capsaicin	04	03.17
10.	EPO	03	02.38
11.	Oxandrolone	03	02.38
12.	Caffeine	03	02.38
13.	Amphetamine	02	01.58
14.	Methenolone	02	01.58
15.	Methandienone	02	01.58
16.	Methylhexane amine	02	01.58
17.	Others Drugs	34	26.98

Table 8 indicates that the players of different games and sports belong to different country of world during were found under influence of 48 performance enhancing banned drugs.

During Olympics games from 1968 to 2012. The Anabolic Steroids were taken by 11.90% players followed by Furosemide (11.11%), Nandrolone (09.52%), Stanozolol (07.94%), Clenbuterol (04.76%), CERA (03.97%), Ephedrine (03.17%), Testosterone (03.17%), Capsaicin (03.17%), EPO (02.38%), Oxandrolone (02.38%), Caffeine (02.38%), Amphetamine (01.58%), Methenolone (01.58%), Methandienone (01.58%), Methylhexane amine (01.58%), and other drugs (26.98%) All these drugs were banned during Olympics games from 1968 to 2012.

4. Discussion

Data was collected of doping cases of players during Olympic games from 1968 to 2012 from many reliable sources. Percentage analysis of data revealed that greater number of Players from United states were found under the influence of performance enhancing drugs than other countries of world during Olympics games from 1968 to 2012.

More than 1/3 third Players in athletics and less than 1/3 third in weightlifting out of 126 players were found under the influence of performance enhancing banned drugs during Olympics games from 1968 to 2012. Very few player from rest of games i.e. Cycling, Equestrian, and wrestling, Gymnastics, Judo and Modern Pentathlon, Shooting, Rowing, Baseball, Boxing, Basketball, Canoeing, Sailing and Swimming were caught under the influence of doping of banned drugs from different country of world.

No body was found under the influence of performance enhancing drugs during Moscow Olympics games in 1980. But in 2004 Athens Olympics games, More than 1/4 (25.41%) players out of 126 (100%) players were caught under the influence of performance enhancing drugs than other Olympics games.

Anabolic Steroids Furosemide, Nandrolone, Stanozolol, Clenbuterol, CERA Ephedrine, Testosterone, Capsaicin, EPO, Oxandrolone, Caffeine, Amphetamine, Methenolone, Methandienone, and Methylhexane amine were the most common performance enhancing drugs, which were taken by the Olympic players during Olympic games from 1968 to 2012.

More than 3/4 players of individual games and less than 1/4 players from team and combat games were found under the influence of performance enhancing banned drugs during Olympics games from 1968 to 2012. Which may be due less awareness of consequences of doping the performance enhancing drugs during Olympic games.

More than 1/3 gold medal winner, about 1/4 silver medal winner and more than 1/4 bronze medal winner players were found under the influence of performance enhancing drugs during Olympics games from 1968 to 2012 held in different country of world. A total of 48 performance enhancing banned drugs were used by the Olympic players of different country of world during the Olympic games from 1968 to 2012

5. Conclusions

1. Maximum number of Players were found under the influence of performance enhancing drugs from United states than other countries of world during Olympics games.
2. Greater tendency of doping the performance enhancing drugs was observed among weightlifters and athletic players during Olympics games.
3. Changing pattern in doping of banned drugs of different categories was observed among weightlifters and athletic players during Olympics games.
4. More tendency of doping the performance enhancing drugs was existed among individual game players during Olympics games from different country of world.
5. All medal winner player from different country of world were found to have an illegal tendency by using of performance enhancing banned drugs during Olympic games from 1968 to 2012.
6. The players of different games and sports were found under influence of the most common performance enhancing banned drugs. during Olympics games i.e. Anabolic Steroids, EPO, Caffeine, Furosemide, Nandrolone, Stanozolol, Clenbuterol, CERA, Ephedrine, Testosterone, Capsaicin, Oxandrolone, Amphetamine, Methenolone, Methandienone, Methylhexane amine,
7. A single player was not found under the influence of performance enhancing drugs during Moscow Olympics games in 1980. But in 2004 Athens Olympics games, greater number of players were found under the influence of performance enhancing drugs than other Olympics games.

6. Suggestions

Players at different levels of their participation should know the negative and positive consequences of the performance enhancing banned drugs. Coaches should also give advice to their trainees not to take these banned substances as per the rule and regulations of Olympic games as well as harmful for health in coming long life. It can be avoid the misuse of these banned drugs through clinics by the authorized agency time to time.

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