EPILOGUE

FIFA's future activities in the fight against doping

J Dvorak, P McCrory, M D'Hooghe

Br J Sports Med 2006;40(Suppl I):i58-i59. doi: 10.1136/bjsm.2006.027771

.....

The fight against doping in sport receives considerable media interest and results in much speculation regarding the ability of athletes to compete on a level playing field. Football was one of the sports that took early leadership in this fight when the Fédération Internationale de Football Association (FIFA) introduced doping controls in football in 1970 as part of a wider strategy to ensure that the results of representative matches were a fair reflection of the ability of those taking part.

As a result of the collaborative effort between FIFA and regional confederations and their member associations in conjunction with national anti-doping organisations, more than 20 000 doping controls are performed annually on football players. The overall incidence of positive doping samples for prohibited substances accounts for 0.4% of all tests. Most of the positive drug tests are due to cannabis and cocaine, the so-called social drugs. Only a few individual cases (0.07% of the positive tests in 2004) were positive for anabolic steroids, such as nandrolone and testosterone.

The majority of doping controls have been carried out in competition. FIFA, the Union of European Football Associations (UEFA), and some of the national anti-doping organisations also perform unannounced, out-of-competition controls at training venues during the football season. Prior to the 2006 FIFA World Cup being held in Germany, unannounced doping controls have been performed in the friendly matches between nations. Doping controls have also been performed during the training camps prior to the opening match on 9 June 2006. All tests to date have proved negative. UEFA has also performed unannounced testing in the 2005–06 football season in all of the teams participating in the UEFA Champions League and UEFA Cup. Ten players were randomly selected from each of the 38 European top professional teams and were subjected to testing. No prohibited substances were found in any of the 380 samples tested.

Since 1994, FIFA has followed a similar strategy in international competitions for both men and women. In these tests, two randomly selected players per team are tested after each finals match and a total of 3327 tests have been performed in 32 tournaments to date. Only three samples have tested positive since testing commenced: one for ephedrine, one for cannabis, and one for nandrolone. One sample tested positive for ephedrine during the qualifying matches for the 2006 FIFA World Cup being held in Germany. The incidence of positive tests in FIFA competitions over the past 12 years is 0.1%.

During the 2000 Olympic Games in Sydney and the 2004 Olympic Games in Athens, none of the football players tested positive for any prohibited substance. The internal surveys of all Olympic team sports federations revealed that none of the team sports athletes tested positive for prohibited substances. The comparison of positive drug tests among different sports is currently not possible as the World Anti-Doping Agency (WADA) presents only adverse analytical findings in their published statistics rather than true positive results. The statistics include "therapeutic use exemptions" as well as elevated (>4) testosterone to epitestosterone (T/E) ratio which may be seen in normal athletes. Football accounts for the majority of doping controls performed worldwide.

The current doping statistics demonstrate a very low incidence of positive tests and justifies the assumption that there is no evidence for systematic doping in football and most probably in any of the other Olympic team sports. Although no clear data are available from WADA about the distribution of in-competition and out-of-competition drug testing, it can be assumed that the majority are performed in competition. It has to be remembered that the professional football season in which the footballers are subject to random testing runs for 49 weeks a year in most football playing nations. There are several possible explanations for the low incidence of the positive findings of prohibited substances among football players.

- The stringent drug testing programme occurs during the entire football season in most countries.
- Football players worldwide understand that prohibited substances in sport will neither improve their physical performance nor their football specific skills and hence are reluctant to use agents that are not effective and subject to possible sanctions.
- Ongoing education campaigns by FIFA for doctors, administrators, officials and players have encouraged a drug-free culture in football.

It is also possible that both in-competition and out-ofcompetition testing is insufficient to detect drug use. This is unlikely, given the large number of in-competition and outof-competition drug tests occurring at all levels of professional sport over many years with relatively few positive results.

Over the past six years FIFA, realising that the dimension of misuse of prohibited substances is different from that in individual Olympic sports, has also developed close collaboration with the medical representatives of other Olympic team sports federations, as well as with the International Rugby Board. The medical representatives of these bodies expressed their collective opinion during the WADA meeting in March 2003 in Copenhagen, suggesting a possible revision of the World Anti-Doping Code given the different needs of international team sports federations and the lack of evidence of systematic doping in those sports. Furthermore, given the testing of over 20 000 doping controls in football annually worldwide, it became obvious that a close collaboration had to be developed with the accredited testing laboratories to understand the different examination methods and to keep abreast of new scientific developments. The close collaboration with the laboratories has resulted in these laboratories being considered equal partners in the global strategy against doping. It has also resulted in a number of research studies being performed on controversial issues such as nandrolone metabolism, analysis of the T/E ratio and the influence of age and ethnic differences on testosterone metabolism.

It seems likely that the constantly increasing number of drug tests will not alter the incidence of positive findings. Unannounced testing at training grounds following the impressive example of UEFA with the Champions League teams could be introduced in all FIFA confederations to provide more information from possible misuse of prohibited substances between official matches. The absence of any positive tests in the UEFA testing to date makes it unlikely that this strategy will identify a significant number of drug cheats who are currently not being detected. Given these findings, the question that arises is whether there is a need for fundamental change in the strategy to fight doping in football?

The FIFA Medical Committee is of the opinion that the educational process has to be intensified with the help of national associations and in particular, through team physicians. Team physicians play a central role in the educational programme as they have direct influence over player behaviour and have the knowledge to advise players, not only on the potential risks to health, but also of the effect that sanctions may have on a player's career if he or she is caught. The 32 team physicians of the 2006 finalists have once again confirmed their unconditional support of FIFA's strategy by signing their joint declaration prior to the 2006 FIFA World Cup GermanyTM. The doping control officer at testing controls can also reinforce the educative aspect of the fight against doping.

FUTURE CHALLENGES IN THE FIGHT AGAINST DOPING

In 2006, FIFA launched a new developmental programme, the Futuro III. The FIFA Medical Committee undertook to implement the mandate of Mr Joseph S Blatter, President of FIFA, and the FIFA Executive Committee, to educate more than 3000 physicians worldwide in football medicine over the next three years. Anti-doping education is an integral part of the instructional courses, which were launched in February 2006 in Oceania and then held again at the CONMEBOL confederation (South America) in April 2006. The active participation within the instructional courses will entitle physicians to become members of the worldwide network of FIFA medical officers, not only to deal with optimal management and prevention of injuries, but also to act as FIFA doping control officers throughout the 207 member associations of FIFA in collaboration with their national antidoping organisations.

In this respect, FIFA is of the opinion that the doping control programmes have to be carried out by the members of the international sports federations and are obligatory for physicians. There is no need to delegate this important work to commercial companies. The experience of FIFA clearly indicates that employing physicians to perform the doping controls is not only effective but can be done at low cost and

most probably will reduce the risk of potential corruption as the physicians have to follow their professional ethical codes of conduct and have medicolegal constraints.

Another challenge is the continuous search for identification of new performance enhancing drugs being distributed on the market via the internet and in this respect medical science, in close collaboration with laboratory experts and the scientific committee of the World Anti-Doping Agency, might help to identify possible new drugs and sanction their misuse accordingly. Arguably the major challenge for the future lies in genetic doping and its detection. There is no doubt that we cannot stop the development of medical science as the development of altered genetic information seeks to benefit the many patients with incurable diseases. Yet it could be hypothesised that this scientific advancement might be misused for performance enhancement in sport. In this regard, the education and cooperation of team physicians forms a crucial link in the chain to prevent athletes adopting such strategies.

CONCLUSION

Following the leadership of FIFA, there is strong evidence that doping controls and sanctions of positive cases are only sufficient if the problem of doping and recreational drugs in sport is tackled over the long term in a comprehensive manner. There are strong indicators that the education of athletes, and in particular footballers, using an established medical network, might be more effective than punitive sanctions alone. The use of team physicians as a central part of the anti-doping strategy serves not only to create a drugfree sports culture but also through education will increasingly improve the overall healthcare management of all athletes.

Furthermore, FIFA welcomes other international sport federations and/or national anti-drug organisations to collaborate with the FIFA Medical Committee/F-MARC and take advantage of the existing worldwide network of team physicians and doping control officers to institute similar anti-doping process and strategies in their own sports and therefore support WADA in its objective—Doping Free Sport.

Authors' affiliations

J Dvorak, FIFA Medical Assessment and Research Centre, and Department of Neurology, Schulthess Clinic, Zurich, Switzerland P McCrory, Centre for Health, Exercise and Sports Medicine, University of Melbourne, Australia M D'Hooghe, FIFA Sports Medical Committee, FIFA Executive

Committee, Bruges, Belgium

Correspondence to: Professor J Dvorak, Chairman, FIFA Medical Assessment and Research Centre, Department of Neurology, Schulthess Clinic, Lengghalde 2, 8008 Zurich, Switzerland; jiri.dvorak@kws.ch