A forensic perspective of the AFL investigation into peptides: an antidoping investigation case study

Peter Rex Harcourt, François Marclay, Brett Clothier

ABSTRACT

Background  The World Anti-Doping Agency (WADA) is introducing enhancements to doping investigations in its 2015 Code, which include improved sharing of information between antidoping organisations (including sporting bodies) and enhanced accountability of athlete support staff. These additions will improve the control of links between sports doping and organised crime. In February 2013 the Australian Crime Commission released a report that linked several professional sporting codes, professional athletes with links to organised crime, performance enhancing drugs and illicit substances. Following this report the Australian Football League (AFL) partnered the Australian national antidoping organisation to investigate peptide use in Australian football.

Methods  This review compared the model proposed by Marclay, a hypothetical model for anti-doping investigations that proposed a forensic intelligence and analysis approach, to use the forensic capabilities of the AFL investigation to test the model’s relevance to an actual case.

Results  The investigation uncovered the use of peptides used to enhance athlete performance. The AFL investigation found a high risk of doping where athlete support staff existed in teams with weak corporate governance controls. A further finding included the need for the investigation to provide a timely response in professional team sports that were sensitive to the competition timing. In the case of the AFL the team was sanctioned prior to the finals as an interim outcome for allowing the risk of use of performance-enhancing substances. Doping violation charges are still being considered.

Discussion  Antidoping strategies should include the investigation of corporate officers in team doping circumstances, the mandatory recording of all athlete substance use during competition and training phases, the wider sharing of forensic intelligence with non-sporting bodies particularly law enforcement and collaboration between antidoping and sporting organisations in doping investigations.

Conclusions  The AFL investigation illustrated the importance of the 2015 WADA Code changes and highlighted the need for a systematic use of broad forensic intelligence activities in the investigation of doping violations.

INTRODUCTION

The World Anti-Doping Agency (WADA) in partnership with its sport and government stakeholders ratified the 2015 WADA Code (WADC) in November 2013. Three of the five key theme changes to the Code were the enhancement of doping investigations as a means of supporting doping violations, greater cooperation between antidoping organisations including investigations, and greater accountability of athlete support staff.

The 2015 WADC allows for investigations by antidoping organisations (ADO) to utilise information other than athlete test results where there may have been doping violations. This information includes forensic intelligence and evidence gathered in a doping violation investigation. The 2015 WADC promotes collaboration between all agencies responsible for the fight against doping, including investigating the involvement of athlete support staff. To achieve these aspirations new capabilities will be required of ADO.

In April 2013, Marclay et al. published a hypothetical model for antidoping investigations that proposed an integrated use of forensic intelligence and analysis. In this paper the authors reviewed the Bay Area Laboratory Co-operative (BALCO) and Operation Puerto investigations and discussed the relatively rare nature of forensic antidoping investigations.

In both these investigations sharing of information on suspicious activities between antidoping authorities and law enforcement agencies proved instrumental to the detection of organised doping networks, the collection of further evidence and ultimately successful prosecution. The investigation of the BALCO case was a catalyst for the recognition of the value of non-analytical sources of information for identifying and proving a doping violation in the absence of adverse analytical findings. Evidence collected on athletes and athlete support staff included seizures of prohibited substances, documents and digital data.

In February 2013 the AFL and Australian Sports Anti-Doping Agency (ASADA), the Australian National Anti-Doping Organisation, started an investigation into peptide use at three AFL clubs by using modern investigative techniques. This investigation took 7 months and involved nine investigators and several technical experts.

This review is a case study that explores the role of the forensic intelligence approach of the AFL peptides doping investigation with particular reference to the Marclay theoretical model. The paper demonstrates that this type of doping investigation can include corporate governance issues, the central role of athlete support staff and the need for a timely response in a professional team sport which has competition time pressures.

AUSTRALIAN FOOTBALL LEAGUE

Australian football is an indigenous football code that is a physical, body contact sport, with physiological demands that involve aerobic capacity,
strength, power and ball handling skills. The AFL competition is conducted as a professional league of 18 teams with over 810 active players. The age of players ranges from 18 to 38 years and all players are bound by a standard contract with obligations to their team and the AFL. The revenue of the AFL in 2012 was $A425 million. The operating budgets of the 18 teams vary from $A35 million per annum to $A75 million pa and the club supporter bases, effectively the shareholders of each team, varies from 35 000 to 80 000 members. The income of players varies from $A80 000 per annum to $A1.2 million per annum.

Based on the physiological demands of the game and the current knowledge of global doping practices, there is a substantial risk of AFL players and teams cheating with anabolic androgenic steroids, hGH, EPO and blood doping. To combat this risk the AFL has a WADA compliant antidoping code and robust testing platform including blood and urine samples.

**AFL INTEGRITY UNIT**

The AFL established a well-resourced Integrity Unit in 2008 in a global environment where corruption, match fixing, improper betting, growing use of performance enhancing drugs (PED) and illicit substances (IS) was occurring alongside the growth of organised crime involvement in some sports. The Unit is responsible for AFL policy, intelligence and investigations of issues affecting the integrity of the competition such as match fixing, doping, illicit drugs, salary cap cheating, the draft and player transfer system. The unit educates players on corruption and doping risks, shares information with betting agencies, collaborates with ASADA on antidoping strategy, tests for new and emerging PED risks (overseas testing, blood and steroid profiling, hGH, EPO and CERA), tests for IS out-of-competition, and investigates off-field athlete behaviour incidents. The unit analyses all this information to inform the AFL on existing and arising issues across all areas of interest.

At the start of the peptides investigation the AFL Integrity Unit had 11 full or part time employees, including a manager, one investigator, one intelligence analyst and a sports physician. During the course of the investigation the AFL and ASADA employed a number of additional staff—investigators, analysts, forensic data experts, pharmacologists and specialist endocrinologists. The Integrity Unit has subsequently been expanded to 14 staff (figure 1).

**AFL-ASADA INVESTIGATION**

In February 2013 the Australian Crime Commission released a report that identified several professional sporting codes and a number of professional athletes with links to organised crime, as well as use of PED and IS. Following the report’s release the AFL and ASADA partnered to undertake an extensive investigation into the use of the peptides and other substances in the AFL.

As in Marclay et al’s theoretical model of forensic intelligence, the AFL and ASADA emphasised collaboration in a multidisciplinary environment to improve investigative efficiency, avoid fragmentation of information and share specialist resources. This investigation was focused and centralised, with complementary forensic activities and scientific resourcing that allowed the exchange of information and sharing of expertise.

Owing to the contract arrangements binding players and officials to a code of practice, the AFL had extensive and, at the time, superior investigative powers to that of ASADA, which facilitated the inquiry and substantially assisted both parties. This collaboration is consistent with one of the new directions of the 2015 WADC.

The AFL investigative powers included access to; players and officials for interviews, mobile phone records of players and officials, emails, team servers, laptops and team files including financial records (table 1). The information obtained was cross-referenced and analysed using internal investigators and intelligence analysts and an external forensic accounting team. As with the BALCO investigation the financial records were of particular value.

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**Figure 1** Illustrates the various functions and work areas of the Integrity Unit.
The information was obtained from a wide range of people and places and was stored in the AFL Integrity Unit’s case management and intelligence database. This sophisticated database permitted the collation and analysis of large amounts of data by intelligence analysts and investigators which permitted the identification and visualisation of the key elements and underlying mechanisms of the possible doping activity under scrutiny. Linking information from different sources provided a comprehensive picture to examine the interactions between athletes and support staff engaging in potential doping. The AFL-ASADA investigation was consistent with the tactical use of forensic intelligence as proposed by Marclay et al.2

As reported by the Australian Crime Commission and partly confirmed by the investigation,7–9 the substances supplied to athletes by team support staff were loosely labelled ‘peptides’ and ‘amino acids’ by the perpetrators. The substances named in the ACC report included CJC 1295, GHRP-6, GHRP-2, AOD 9604, hexarelin, ipamorelin, somatropin and other substances, some of unknown nature. The mix of these peptides varied from team to team and athlete to athlete. Generally the substances were given in injection form by non-medical trained team support personnel. In the AFL investigation, due to the lack of individual athlete and team documentation, the precise nature and doses of substances that were given to each athlete was uncertain or unknown.

Under the WADA Prohibited List many of these substances are prohibited, being human growth hormone (hGH) releasing substances or sections of the hGH molecule. They are listed on the WADA Prohibited List under categories S2 (peptide hormones, growth factors and related substances) and/or S0 (non-approved substances).10

Immediately following the AFL investigation one team was charged with ‘bringing the game into disrepute’ under AFL Rules.8,9 The team was fined $A2 million, sanctioned with loss of player draft picks and not permitted to compete in the 2013 championship finals. By accepting the sanctions, the team acknowledged there had been a risk its players had been administering WADA-prohibited substances, the basis of the initial charges. Three team support staff officials were also sanctioned with suspension or fine.

The impending 2013 AFL championship finals highlighted the need for the League to promptly respond to potential team-based doping, in contrast to the longer legal process for determining whether team or individual doping violations had actually occurred. The team’s elimination from the championship finals avoided the possibility of athletes who had potentially used banned substances contributing to a team’s success in finals. The determination of doping violations for individuals and/or the teams is a complex legal exercise and, at the time of writing this paper, is under consideration by ASADA.

In parallel with the AFL investigation one of the clubs undertook an internal review.11 The report described ‘a pharmacologically experimental environment never adequately controlled or documented’, ‘the use of exotic supplements’, ‘marginalisation of traditional medical staff’ and the failure of good governance.11 The report found that uncontrolled athlete support staff caused by a breakdown of normal organisation controls, lack of documentation and poor staff accountability led to the potential doping activities. The report recommended a number of internal governance reforms. The AFL-ASADA investigation confirmed the corporate governance failure.

It would appear that a doping investigation of a team requires an assessment of corporate governance practices. Additional external regulator involvement such as those overseeing healthcare funding, occupational health and safety and corporation law may also be necessary. Such investigations may involve a number of regulators and not be exclusively confined to antidoping organisations. Equally peak sporting bodies need to expand their own roles beyond that of sporting competition regulators.

The AFL-ASADA investigation was resource intensive from financial, technical and personnel perspectives. This raises the question of who should be accountable for the cost of such investigations as it is likely National Anti-Doping Organisations may be reluctant to take on the full liability of such activities.

DISCUSSION

To our knowledge the depth and range of forensic intelligence had not previously been used in an antidoping investigation. Collating information of potential doping activities in a database the investigators were able to better understand the possible operations of the supply network. Intelligence produced through extensive analysis of data allowed the investigation team to identify the structure and dynamics of the illicit activities. The AFL-ASADA investigation demonstrated the need for, and efficiency of, a partnership between sporting bodies and antidoping organisations. This inquiry highlighted a tactical, and to some extent operational, use of the Marclay et al’s model. Data gathering and processing detected irregular activities and their evolution, and determined the role of athletes and support staff, providing evidence for potential court proceedings. As such, the investigation illustrated the practicality of Marclay et al’s model.

While the investigation was largely reactive in nature, early detection and a more timely response to future potential doping activities should now result. The exchange of information between the AFL and ASADA, and the potential additional involvement of law enforcement, may prevent similar breaches in the future.

Governmental agencies such as the Australian Crime Commission, Australian Customs, Australian Federal Police and State law enforcement hold extensive information relevant to the fight against doping. Prohibited substances entering the Australian territory or already on Australian soil are regularly seized by law enforcement agencies, informing antidoping organisations on substance availability on the black market and their distribution. The trafficking of PED and IS often originates from the same criminal organisations’ and evidence on doping

<table>
<thead>
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<th>Data retrieved</th>
<th>Number</th>
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<tr>
<td>Investigations personnel</td>
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<td>Interviews</td>
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<td>Duration of interviews</td>
<td>600+ hours</td>
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<tr>
<td>Digital record seizures</td>
<td>1.5 terabytes</td>
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<tr>
<td>Mobile phone seizures</td>
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<tr>
<td>Text messages/call content</td>
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<td>Laptop computer seizures</td>
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<tr>
<td>Emails</td>
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<tr>
<td>Line entries in financial systems</td>
<td>6.8 million</td>
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<tr>
<td>Drug test and steroid profiles</td>
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<tr>
<td>Drug test declarations reviewed</td>
<td>61</td>
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<tr>
<td>AFL cost</td>
<td>$A1.3 million</td>
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</tbody>
</table>

AFL, Australian Football League.

activity is likely to appear in law enforcement files. Systematic sharing of this type of information with the sporting organisations, such as the AFL, and NDOs, such as ASADA, should enhance the capacity to detect organised doping in sport. Resources, costs and reaction time would be reduced through partnership with law enforcement, with their superior investigative skills and experience with criminal organisations.

Early detection through strategic internet monitoring of PEDs should identify new trends in the structure of the doping market. The analysis of digital data from sales websites, forums, blogs, social networks and other online media should contribute to greater knowledge of distribution network activity, raise prevention alerts to be passed on to athletes and support staff, as well as identification of individuals who are actively engaged in doping practices. Indeed this case highlighted the emergence of peptides into the doping marketplace and their access through antiageing clinics and compound pharmacies. The use of compounding pharmacy to by-pass national regulation, the advisory role of personnel in antiageing clinics and their promotion of non-scientific practices such as peptide use were identified by the investigation. The WADA status of some of these products was unclear and an early detection strategy would allow greater clarity of the status of such new substances.

The AFL case study highlighted time and operational restraints of the competition itself. The investigation was undertaken alongside weekly competition and could have disrupted a team’s ability to function. Furthermore, the AFL-ASADA investigation led into the championship finals period that raised the practical issue of participation of a team potentially advantaged by the use of PEDs. The AFL overcame the issue of timeliness of action by using code of conduct clauses in its rules and based its actions on the significant risk of doping as opposed to a proven violation.

Finally, the peptides use in the team was overseen by team support staff. Good corporate governance practices in sporting teams is essential and this investigation questions whether team corporate officers should be made accountable in antidoping codes for governance breakdown that increase the risk of doping.

CONCLUSIONS
The 2015 WADC will enhance doping investigations, increase accountability of athlete support staff and improve sharing of antidoping intelligence and information. This AFL case study illustrates the importance of these changes and highlights the role of broad forensic intelligence activities in the investigation of doping violations. The model proposed by Marclay et al compared favourably with this case study and that model appears to guide utilisation of the breadth forensic intelligence in doping investigations.

The findings of the AFL investigation demonstrated that poor management of athlete support staff combined with weak corporate governance controls, posed a doping risk. The investigation further verified the emergence of peptides in doping activities and the role of antiageing clinics and compound pharmacies as potential conduits of doping activities.

In professional team sports there is the need for timely management of investigation outcomes that are not easily aligned with normal legal antidoping practices. Antidoping strategy changes that could be considered include the mandatory recording of athlete substance use during competition and training phases, the wider sharing of forensic intelligence with non-sporting bodies particularly law enforcement, the potential role of an examination of corporate governance practices within a sporting organisation and further improved collaboration between antidoping and sporting organisations in doping investigations.

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