MALTA FOOTBALL ASSOCIATION

Technical Sector, Ta'Qali

Sport Season 2016/2017

UEFA Development Tournament

Malta February 2017

Malta – Andorra – Armenia – Gibraltar

MATCH RUNNING PERFORMANCE

Introduction

Most professional football academies are seeking to optimize the early detection and physical development of their young players. The assessment of the physical determinants of running performance during competitive matches according to age and playing position is therefore required to improve talent detection and long-term training interventions. Nevertheless, while important quantity of information is available about the physical and physiological demands of professional football players during match play, little is known about young highly trained football players.

The purpose of this preliminary report is to examine the match running performance of young highly trained football players among the teams participating in the UEFA Development Tournament.

Methods

Motion match analyses (Global Positioning System, K-Sport Italy) were performed on 51 young different players belonging to Andorra, Armenia, Gibraltar and Malta national team **(Table 1).** All players analyzed played between a minimum of 40' (One Half) to all game (2x40') plus additional time. A meeting with officials and coaches held prior the starting of the tournament was held to explain the purpose of the analysis and to have an oral consensus of the players. Relative distance (Rel/D), average metabolic power (AMP), distance covered high intensity acceleration per minute (D_HIAcc/Min; $>2m/sec^2$), distance covered high intensity deceleration per minute (D_HIDec/Min; $<2m/sec^2$), distance covered high intensity speed per minute (D_HIS/Min; >16 km/h) and distance covered high intensity metabolic power per minute (D_HIMP/Min; $>20W/Kg$) were computed during 5 games **(Table 2).** The analysis of the data obtained and their relative conclusions will be definitely affected by the different games and minutes played by the players analyzed.

	Andorra	Armenia	Gibraltar	Malta
Number of players	11	8	14	18
Number of games analyzed	2	1	3	3

Table 1: Numbers of players and games analyzed per team

GAMES		PLAYERS ANALYZED	AVERAGE MINUTES PLAYED
Malta vs Armenia	Malta	8	73' 15''
	Armenia	8	71' 50''
Gibraltar vs Andorra	Gibraltar	8	82' 46''
	Andorra	8	65' 33''
Armenia vs Gibraltar	Armenia	0	0
	Gibraltar	8	70' 25''
Malta vs Andorra	Malta	8	70' 28''
	Andorra	8	73' 21''
Malta vs Gibraltar	Malta	8	73' 35''
	Gibraltar	8	69' 42''

Table 2: *Games, players analyzed and average minutes played in each game*

Due to the regulations of the development tournament, where till a maximum of 9 substitutions were possible within the same game, we decided to analyze and show the parameter chosen in relation to a unit of time (per minute) so

that to use all the data recorded on the tournament. In **table 3** it is present a short explanation of the parameters analyzed.

Parameter		Description
Relative Distance	Rel/D	Distance covered in one minute
Average Metabolic Power	AMP	Measure of energy required, per unit of time. It depends on both speed and acceleration
Distance High Intensity Acceleration per Minute	D_HIAcc/Min	Distance covered at high intensity acceleration (>2m/sec2)
Distance High Intensity Deceleration per Minute	D_HIDec/Min	Distance covered at high intensity deceleration (<2m/sec2)
Distance High Intensity Speed per Minute	D_HIS/Min	Distance covered at high speed of running (>16 km/h)
Distance High Intensity Metabolic Power per Minute	D_HIMP/Min	Distance covered at high metabolic power (>20 W/kg)

Table 3: Running parameters and their short explanation

Results

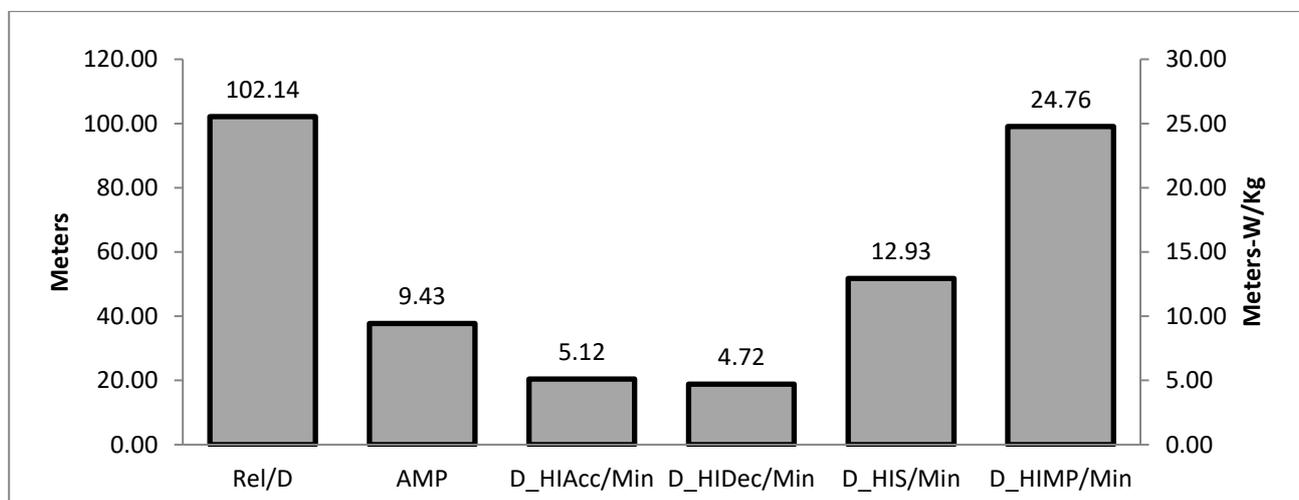Match running performance of the 5 games analyzed are shown in **Fig 1**.

Fig 1: Match running performance

The figures 2,3,4,5,6 and 7 show the data analyzed per parameters and their differences among the teams. Considering the Rel/D, Andorra registered the highest score running on average of 104,1m per minute, followed by Malta (103,3m/Min), Armenia (101,8m/Min) and Gibraltar (99,8m/Min). The average considering all the teams was 102,1m/Min (**Fig 2**).
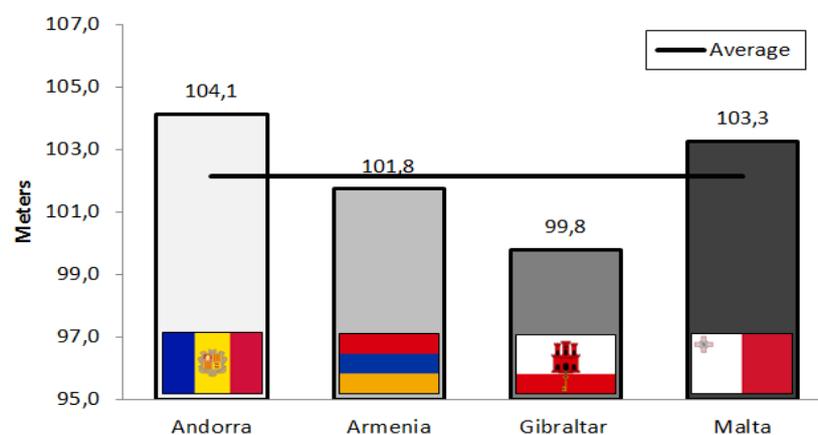

Fig 2: Relative distance

In figure 3 we can appreciate the results in metabolic power recorded in the four teams analyzed. Even in this case Andorra registered the highest score with 9,62 w/kg, followed by Malta (9,57 w/kg), Armenia (9,47 w/Kg) and Gibraltar (9,15 w/Kg). The average considering all the teams was 9,43 w/kg (**Fig 3**).
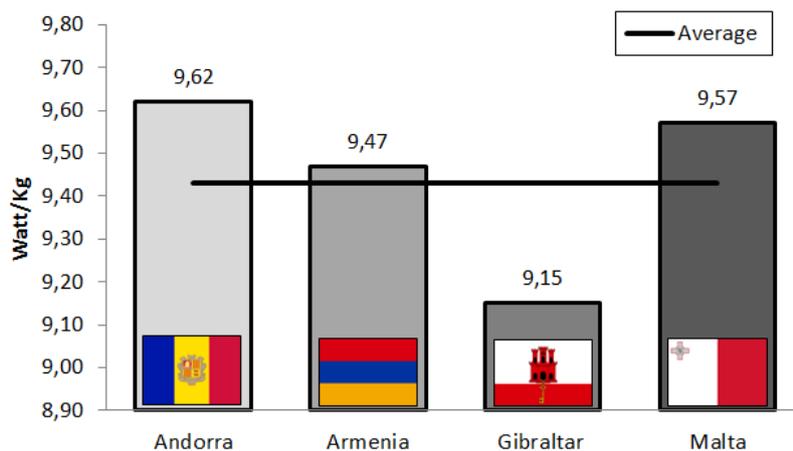

Fig 3: Average metabolic power

The figures 4 and 5 show the distance covered at high intensity acceleration and deceleration per minute respectively. In the two mentioned parameters we can appreciate the same trend, Armenia registered the highest score with 5,50m high intensity acceleration per minute and 5,15m high intensity deceleration per minutes respectively, followed by Andorra (5,42m and 4,97m respectively), Malta (5,25m and 4,72m respectively) and Gibraltar (4,65m and 4,41 m respectively). The all teams average recorded was: 5,12m for the high intensity acceleration and 4,72 for the high intensity deceleration per minute.
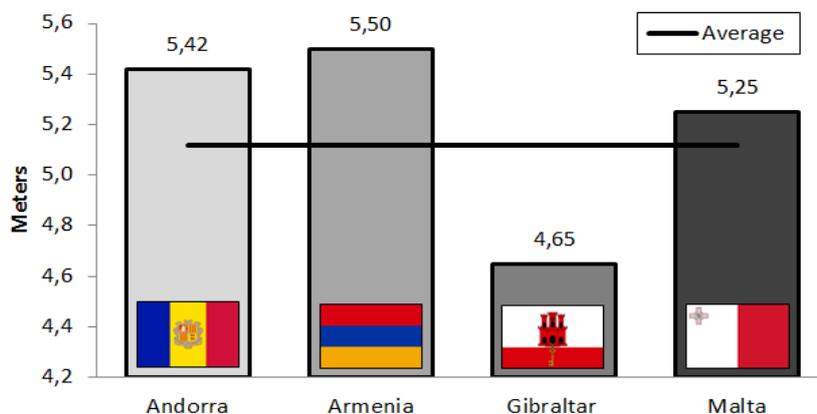

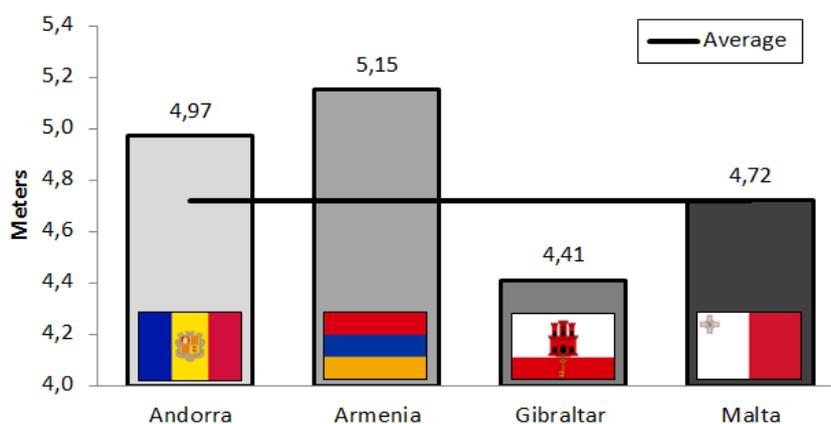**Fig 4:** Distance covered high intensity acceleration per minute

Fig 5: Distance covered high intensity deceleration per minute

Considering the distance covered at high speed of running per minute (figure 6) Malta registered the highest score with 13,49m, followed by Andorra (13,12m), Gibraltar (12,50) and Armenia (12,14m). The overall average was 12,93m.
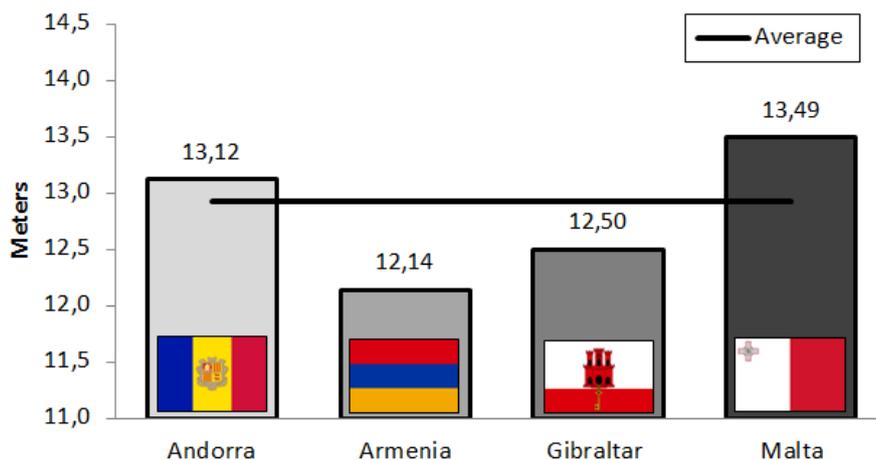

Fig 6: Distance covered at high intensity speed per minute

Last parameter analyzed is the distance covered at high intensity metabolic power per minute (figure 7); as in the total distance covered at high intensity speed per minute Malta registered the highest score with 25,72 m, followed by Andorra (25,08 m), Gibraltar (24,11m) and Armenia (23,22m). The all teams average recorded was 24,76m.
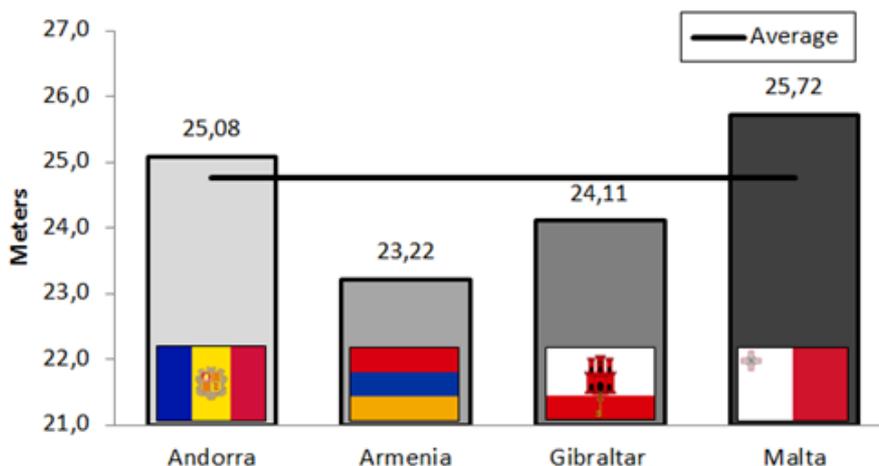

Fig 7: Distance covered high intensity metabolic power

Conclusions

For the Malta Football Association this is the first time that the activity profiles of trained young football players are recorded during an international football tournament. The main aim of the analysis were 1) to assess the running profiles in official matches and 2) make a comparison among the teams that take part in the tournament. Due the limited data recorded further investigation are needed to have a more detailed analysis.