03 - IDENTIFICATION OF DERMATOGLYPHIC CHARACTERISTICS, SOMATOTYPE AND PHYSICAL QUALITIES PROFILES OF BRAZILIAN MILITARY PENTATHLON TEAM

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1- Introduction

The Military Pentathlon has its origins in 1946, based in one technique of training of Dutch Paratrooper units. Afterwards, in 1947, at Military Center of Physical Training, in Freiburg, the zone of French occupation in Germany, it has organized a simplified and pilot competition, with an improvised regulation, that had as resultant a competition largely adopted by all the French Armed Forces with the name of Military Pentathlon. The new sport was composed by rifle shooting, obstacles track, swimming track, launching of grenades and 8 km running, alerting for the interest of International Military Sports Council (CISM), that had initiated the development of the incentive spirit to the different countries organizing annual competitions, since 1950. Military Pentathlon is considered the first and the most elegant of CISM's sports (CISM, 2003).

Brazil participated for the first time in 1957, getting modest 7th place and attended in almost all world championships, conquering the heading of champion in the years of 1960, 1965, 1985, 1987, 1990, 1991 and 1994; the vice-championships in the years of 1961, 1964, 1984, 1986, 1988, 1989, 1992, 1993, 1995, 1996, 1997, 1998, 1999, 2001 and 2004 beyond other expressive results. In the American continent, Brazil possesses total hegemony, withholding almost all individual and team records (EsEFEx, 1990).

On the World Military Pentathlon Championship, each country is represented by a team of, in the maximum six competitors. It is determined general team classification for points addition that have gotten by the four better athletes, on the end of the five tests, when each performance is transformed into points in specific tables for each one of the five events (CISM, 2003).

Nowadays, Brazil is looking for a renewal and there is no scientific study about the identification of dermatoglyphic and somatotype profiles and basic physical qualities that characterize Military Pentathlon high level athletes.

Brazilian Military Pentathlon although its excellent retrospective and great international tradition is making a strong effort for the scientific improvement of training techniques and for methodology of athletes accompaniment. Its practice became more deficient, because of a difficulty to discover and to train new athletes. Annually, in Brazil, only one national championship is organized that works as a selective for the World and South American championships. Despite this, scientific studies in our country, about this modality and more specifically about our athletes are incipient. About this, a thought is that the knowledge of sport potentialities is judged primordial, for physical characteristics analyses, genotype and basic physical qualities, in order to make possible potentialities maximization and to describe a model that serves as base for eventual parameters for the sport development.

1.1- Objective

The objective of the present study was to identify to the dermatoglyphic characteristics, somatotype and basic physical qualities profiles of Brazilian Military Pentathlon high level athletes.

2- Methods

2.1- Population

The population was composed by Brazilian Military Pentathlon athletes' participants of Brazilian Armed Forces Military Pentathlon Championship - 2004. The sample was composed by Brazilian team convoked by Brazilian Military Sports Commission in order to participate on 52th CISM's Military Pentathlon World Championship - 2004.

2.2- Procedures

Initially, the athletes were informed about the objectives of the study and answered a questionnaire, afterwards signed the assent term. Later, some recommendations were listed about the regular procedures during data assessment. In this occasion, the sample has been oriented about the procedures to be taken for fingerprints evaluation by Cummins & Midlo protocol (1942, apud Fernandes Filho, 1997), somatotype (Carter & Heath, 1990) and physical tests related to the basic physical qualities coordination - Burpee Test; speed - 50 m launched Running Test; explosive force of inferior members - Sargeant Jump Test; explosive force of superior members - Two Hand Medicine Ball Put; agility - Shuttle Run; flexibility - Seat and Reach Test (Johnson & Nelson, 1979); aerobic resistance (Léger & Boucher, 1980); and anaerobic resistance - 40 sec Running Test (Matsudo, 1979).

3- Analysis and results discussion

The fingerprints drawings were analyzed about its types of combination, number of deltas (D10), the amount of lines (QL), as well as the addition total lines amount (SQTL). Concerning the somatotype, it was divided in its three components of endomorphy, mesomorphy and ectomorphy.

It was also observed reached values on the tests related to physical qualities elected as basic on the sport.

The TABLES 1 and 2 contain mean, minimum, maximum results and sample characterization deviation, fingerprints drawings, D10, QL, SQTL, somatotype and basic physical qualities.

TABLE 1 - MILITARY PENTATHLON ATHLETES' CHARACTERISTICS

	N	μ	Minimum	Maximum	σ
Age (years)	6	35,33	31	43	4,93
Body mass (kg)	6	72,28	62,9	82,8	8,16
Stature (cm)	6	174,92	166	181	5,41
Arch (A)	6	1,33	0,00	4,00	1,75
Loop (L)	6	7,6	5,00	10,00	1,52
Whorl (W)	6	0,67	0,00	1,00	0,67
D 10	6	9,2	6,00	11,00	2,17
Endomorphy	6	1,52	1,32	1,69	0,13
Mesomorphy	6	5,55	4,63	1,48	1,03
Ectomorphy	6	2,20	6,88	3,08	0,57
$\dot{V}O_{2max}$ [ml(kg.min)$^{-1}$]	6	66,47	62,5	70,50	3,25
Anaerobic resistance (m)	6	296,5	292	303	4,04
Agility (s)	6	9,03	8,80	9,25	0,17
Speed - 50 m launched (s)	6	5,81	5,51	6,15	0,24
Flexibility (cm)	6	52	47	57,5	4,11
Explosive force of superior members (cm)	6	5,08	4,90	5,40	0,21
Explosive force of inferior members (cm)	6	59,33	47,5	66,5	6,46
Coordination (executed parts)	6	16,67	16	17	0,52

σ= standard deviation, μ= mean

The 13 years of age amplitude and the high average of 35,33 years, demonstrate the influence of the factor experience in the attainment of excellent results, as well as the existing interaction between youngest athletes and most experienced ones. Concerning basic physical qualities, the average value of demonstrates a very good aerobic resistance, materialized with the second and third ranks on running event in the World Championships 2003 and 2004, respectively. In relation to anaerobic resistance results, the athletes (296,5+4,04 m) present similar results to Track and Field athletes (295,90+17,70 m) (MATSUDO, 1988). Concerning to agility, the results presented values close to Futsal (DANTAS, 2002). Regarding the force of superior members the joined values are fit in the intermediate level of performance, according to Marins and Giannichi (1998). The presented average related to force of inferior members was of 59,33+6,46 cm very similar to the Futsal, 59,50 ± 4,55 cm. Tests results of other physical qualities had not been found in searched literature, for a similar sample, so that the pertinent scheduling was effected. However, the detached values are basic for the accomplishment of future comparisons.

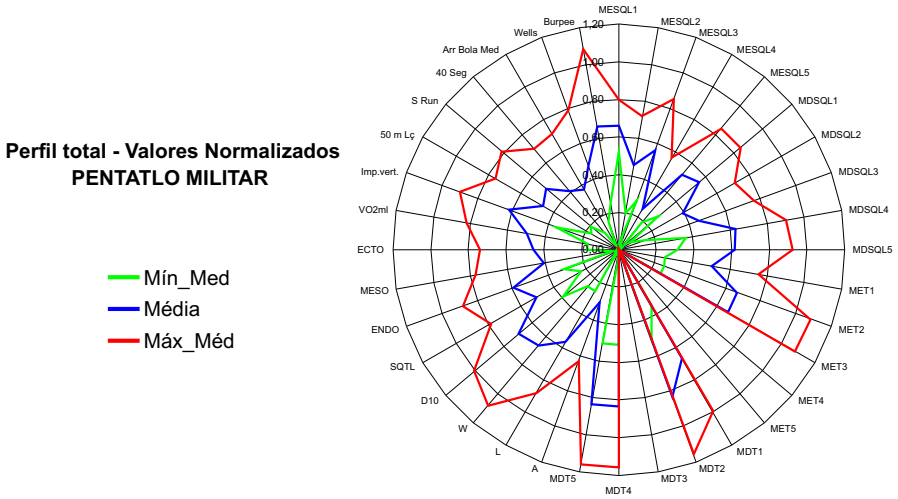
TABLE 2 - MILITARY PENTATHLON DERMATOGLYPHIC VALUES

	MESQL1	MESQL2	MESQL3	MESQL4	MESQL5	MDSQL1	MDSQL2	MDSQL3	MDSQL4	MDSQL5	SQTL
N	6	6	6	6	6	6	6	6	6	6	6
μ	11,8	6,5	5,7	8,5	7,2	12,8	5,8	8,0	8,8	7,2	82,3
σ	6,79	5,47	5,32	2,35	4,07	8,13	5,98	4,20	4,71	3,82	42,34
SE_M	2,77	2,23	2,17	0,96	1,66	3,30	2,44	1,71	1,92	1,56	17,28
MINIMUM	0	0	0	7	2	0	0	3	0	1	20,00
MAXIMUM	21	16	13	13	12	23	15	14	14	11	143,0

σ= standard deviation, μ= mean e SE_M= standard error.

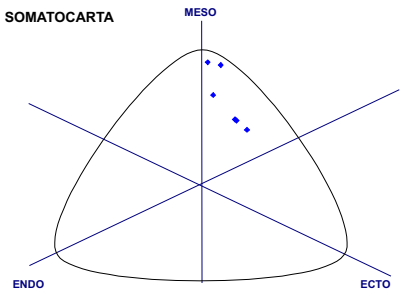
For the analysis of the referring dermatoglyphic values, it's perceived that Military Pentathlon athletes have predominance for digital drawing L, moderate index of D10 and SQTL, being fit between levels II and III of the dermatoglyphic index classification and somato-functionaries proposal by Abramova et al. (1995). The physical qualities of force, speed, power and static stability, symptomatic in high level sports and short time of duration. The natural trend of these physical qualities is perceived by the type of digital drawing and by the amount of lines, however, coordinate characteristics and relative force could be shown less developed, in case that they have not been stimulated in the adjusted phases of the motor development, by means of specific training. To follow, in GRAPH 1, it's observed the normalized values of the studied variables:

GRAPHIC 1 - MILITARY PENTATHLON ATHLETES' DERMATOGLYPHIC, SOMATOTYPE AND BASIC PHYSICAL QUALITIES NORMALIZED PROFILE



In GRAPH 2 below, it has the relative values of athletes' somatotype. It is observed that the athletes present as average (1,52 + 0,13, 5,55 + 1,03, 2,2 + 0,57), characterizing them as meso-ectomorph. Related to other sports, for not existing results concerning Military Pentathlon, the gotten results are resembled with the Track and Field speed athletes, 100 and 200 m, and with the decathlon (CARTER & HEATH, 1990, p. 246) that possess the same characteristics of Military Pentathlon, being a sport of combined events.

GRÁFICO 2 - MILITARY PENTATHLON ATHLETES' SOMATOCHART



5- Conclusion

The research searched, by means of qualitative and quantitative indexes, represented by the fingerprints, anthropometric characteristics, evidenced by somatotype and basic physical qualities values to describe the profile of Brazilian Military Pentathlon team, looking for informative characteristics of objective marks and of orientation of sports selection.

In a general way, it does not have in Brazil and probably in the world a scientific study about this subject, being this, the first study of the world four times champion team, that despite the advanced age of some athletes, still possess high level of competitiveness. So, a deepened comparison of gotten results, in the present research, with other world teams, became impracticable.

The values found in the applied tests to evaluate basic physical qualities can not translate the performance presented in a

competition. Such affirmation is justified in the impossibility of evaluate the physical quality desired and the applied motor gesture in the tests, the concentration level, the athletes emotional state, amongst other factors during the competitions. However, the gotten results for the studied team had been considered pertinent to the applied tests and the team was itself second place on World Military Pentathlon Championship 2004.

Thus, it's expected that the gotten data referring to dermatoglyphic, somatotype and physical qualities of aerobic resistance, force of inferior members, speed, agility, lactic anaerobic resistance, force of superior members, flexibility, coordination and other information referred to the sport in question can serve of descriptive and comparative parameter for studies related to the physical preparation, technique and tactics, to the election and detention of talents, to the procedures of sport initiation, among others.

This way, this study came to present the profile of Brazilian Military Pentathlon team, in order to allow that this same population can be compared, in one another chance, with itself, with other national and international teams, and/or serve as a concrete subsidy of high level sports formation and renewal of Military Pentathlon in Brazil.

It's expected that this research could motivate new studies concerning Military Pentathlon, stimulating its practice, becoming more popular and, moreover, the desire that Brazil can come back to occupy the first place on International Military Sports Council world ranking.

Bibliography

1- ABRAMOVA T. F.; NIKITINA T. M.; OZOLIN N. N. Possibilidades das Impressões Dermatoglíficas no prognóstico dos potenciais energéticos nos atletas que praticam remo acadêmico / Atualidades na preparação de atletas nos esportes cíclicos. In: ***Coletânea de artigos científicos***. Volvograd, cap.2, p. 57-61, 1995.

2- CARTER J. E. L.; HEATH, B. H. ***Somatotyping***: development and applications. New York: Cambridge University Press, 1990.

3- CISM, Conselho Internacional do Desporto Militar. ***Regras Gerais do Pentatlo Militar - Parte A***. 2003.

4- CUMMINS, H. & MIDLO, C. ***Palmar and plantar dermatoglyphics in primates.*** Philadelphia, 1942.

5- DANTAS, E. H. M. ***A Prática da Preparação Física***. 5. ed. Rio de Janeiro: Shape, 2003.

6- DANTAS, P. M. S. & FERNANDES FILHO, J. Identificação dos perfis genéticos, de aptidão física e somatotípico que caracterizam atletas masculinos, de alto rendimento, participantes do Futsal adulto, no Brasil. ***Fitness & Performance Journal***, Rio de Janeiro, v. 1, n. 1, p. 28-36, 2002.

7- EsEFEx. A Geração de Ouro e Prata do Pentatlo Militar Brasileiro. ***Revista de Educação Física*** n 118, p. 28-38, 1990.

8- FERNANDES FILHO, J. ***Impressões dermatoglíficas - marcas genéticas na seleção dos tipos de esporte e lutas (a exemplo de desportista do Brasil)***. Tese de Doutorado. Moscou. URSS. 1997.

9- JOHNSON, B. L. & NELSON, J. K. ***Practical measurements for evaluation in physical education***. 3. ed. Edina: Burgess Publishing, 1979.

10- LÉGER, L.; BOUCHER, R. An indirect continuous running multistage field test: The Université de Montréal Track Test, ***Can J Appl Sport Sci***. v. 5, p. 77-84, 1980.

11- MARINS, J. C. B.; GIANNICHI, R. ***Avaliação e prescrição de atividade física:*** guia prático. 2. ed.Rio de Janeiro: Shape, 1998.

12- MATSUDO, V. K. R. ***Testes em Ciências do Esporte***. 4. ed. São Caetano do Sul: Gráficos Burti, 1987.

13- _____ . ***Teste de Corrida de 40 segundos: perspectivas de uma década.*** Revista Brasileira de Ciência e Movimento, Brasil, v.2, m2, p 24-31, 1988.

14- SILVA, R. F.; ZARY, J. C. F.; PINHEIRO DA CUNHA, R. S.; MARTINS, M. E. A.; FERREIRA, A. A. M.; LINCOLN, A. T. & FERNANDES FILHO, J. Perfil dermatoglífico e somatotípico da equipe brasileira de Pentatlo Militar participante do 51º Campeonato Mundial de Pentatlo Militar do CISM. In: XXVI SIMPÓSIO INTERNACIONAL DE CIÊNCIAS DO ESPORTE, São Paulo, ***Atividade Física Construindo Saúde***, São Paulo: CITTA Gráfica, 2003, p. 222-222.

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DERMATOGLYPHIC CHARACTERISTICS, SOMATOTYPE AND PHYSICAL QUALITIES IDENTIFICATION OF BRAZILIAN MILITARY PENTATHLON TEAM

ABSTRACT

The present study aims to identify military pentathlon high level athletes profile about dermatogliphics, somatotype and physical qualities. In elaborating this work, six athletes from the Brazilian military team were observed. They competed in the last edition of the world championship of the Conseil International de Desports Militaires (CISM). The practical implication, in identifying the profile of military pentathlon athletes in Brazil, is incorporated with the needs of this sport modality, because Brazil is four times world champion of the CISM and this team needs to get younger. By the way, Brazil needs some data to find the new athletes and to develop new values in this sport. The group was submitted to an evaluation to identify the dermatoglyphic profile by means of digital impressions (DI), following the protocol of Cummins and Midlo (1942), to an evaluation of somatotype, by the anthropometric method of Heath-Carter (1967), and tests of some physical qualities: Coordination (Burpee Test - Johnson & Nelson, 1979); Speed (50 meters running - Johnson & Nelson, 1979); Legs power (Sargent Jump test - Johnson & Nelson, 1979); Arms power (Two Hand Medicine Ball Put - Johnson & Nelson,1979); Aerobic resistance (Léger-Boucher - Léger e Boucher,1980); Agility (Shuttle Run, Johnson & Nelson (1979); Flexibility (Seat and Reach Test, Johnson & Nelson (1979) and Anaerobic resistance (40 seconds running - Matsudo, 1979). In identifying the genetic profile, the characteristics of models of the Digital Impressions were elaborated for high performance, male, pentathlon athletes, that included the most informative and integral: D10= 9,20 ± 2,17; SQTL= 82,3 ± 42,34; L= 7,60 ± 1,52; W = 0,67 ± 0,52 e A= 1,33 ± 1,75, with high incidence of loop (L) and low incidence of whool (W). The predominant types of digital form were also established: AL = 16,7 %; L>W = 33,3 %, 10L = 16,7 % e ALW = 33,3 %. In identifying the somatotype profile, the characteristics of the group studied were presented following the three components of somatotype of Heath-Carter, which were: endomorphy = 1,51 ± 0,17; mesomorphy = 5,55 ± 1,03; and ectomorphy = 2,20 ± 0,57. These values characterize the group studied as meso-ectomorphyc. About the basic physical qualities, the results were: Coordination 16,67 +/- 0,52 parts, Speed 5,81 +/- sec, Legs power 59,33 +/- 6,46 cm, Arms power 5,08 +/- 0,21 cm, Aerobic resistance 66,47 +/- 3,25 ml ($kg.min^{-1}$), Agility 9,03 +/- 0,17 sec, flexibility 52 +/- 4,11 cm ans Anaerobic resistance 296,50 +/- 4,04 m. The results applied to this team warranted the second place in the last Military Pentathlon World Championship in Chile.

KEYWORDS: Dermatoglific profile, Somatotype, Physical qualities.

IDENTIFICATION DES PROFILS DERMATOGLYPHIQUES ET SOMATOTYPIQUE ET DES QUALITÉS PHYSIQUES DE BASE QUI CARACTÉRISENT DES ATHLÈTES DE PENTATHLON MILITAIRE MASCULIN DE HAUTE PERFOMANCE AU BRÉSIL

RÉSUMÉ

Cette étude a eu comme objectif identifier les caractéristiques du profil dermatoglyphique et somatotypique et des qualités physiques de base qui caratérisent des athlètes de pentathlon militaire masculin de haute perfomance au Brésil. Lors de l'élaboration de

ce travail, on a considéré comme exemple les 06 athlètes convoqués par la Commission Sportive Militaire du Brésil (CDMB), qui ont disputé le championnat mondial de pentathlon militaire du Conseil International de Sports Militaires (CISM). L'implication pratique dans l'identification du profil du pentathlon militaire au Brésil s'est unie avec les besoins de cette modalité sportive, car il y a un manque, dans notre pays, de renseignements sur ce sport qui est tetrachampion du CISM et qui a son équipe en renovation. Il faut, alors, des données qui servent à des paramètres pour les futures convocations et le développement de nouvelles valeurs. Le groupe a été soumis à une évaluation pour identifier le profil dermatoglyphique à travers les impressions digitales (ID), selon le protocole de Cummins & Midlo (1942), à une évaluation du somatotype par la méthode antropomètrique de Heath-Carter (1967) et à des tests pour évaluer les qualités physiques suivantes, selon le protocole des tests: de coordination Test de Burpee, Johnson & Nelson (1979); vitesse, test de course de 50 mètres, Johnson & Nelson (1979); force explosive des membres inférieurs *Sargent Jump test,* Johnson & Nelson (1979); force explosive des membres supérieurs, T*wo Hand Medicine Ball Put,* Johnson & Nelson (1979); résistence aérobique, Léger-Boucher, Léger et Boucher (1980); adresse, *Shuttle Run,* Johnson & Nelson (1979); fléxibilité, *Seat and Reach Test,* Johnson & Nelson (1979) et résistence anaérobique, Test de Course de 40 secondes, Matsudo (1979). Dans l'identification du profil dermatoglyphique ont été élaborées les caractéristiques des modèles des impressions digitales pour les athètes de pentathlon militaire de haute perfomance qui incluent les données plus informatives et intégrale: D10= 9,20 ± 2,17; SQTL= 82,3 ± 42,34; L= 7,60 ± 1,52; W = 0,67 ± 0,52 e A= 1,33 ± 1,75, c'est-à-dire, prédominance de présille (L) et petite présence de verticille (W). Aussi ont été établis les types plus importants de formule: AL = 16,7 %; L>W = 33,3 %, 10L = 16,7 % et ALW = 33,3 %. Dans l'identification du profil somatotypique, ont été présentées les caractéristiques du groupe recherché, selon les trois composants du somatotype de Heath-Carter, soit: endomorphie = 1,51 ± 0,17; mesomorphie = 5,55 ± 1,03 et ectomorphie = 2,2 ± 0,57. Ces valeurs caractérisent le groupe recherché comme meso- .En ce qui concerne les qualités physiques de base, l'équipe a présenté les résultats suivants: coordination 16,67 +/- 0,52 parties, vitesse 5,81 +/- seg, force explosive de membres inférieurs 59,33 +/- 6,46 cm, force explosive de membres supérieurs 5,08 +/- 0,21 cm, résistence aérobique 66,47 +/- 3,25 ml (kg.min^{-1}), adresse 9,03 +/- 0,17 seg, fléxibilité 52 +/- 4,11 cm et résistence anaérobique 296,50 +/- 4,04 m. Ces résultats appliqués sur la modalité sportive ont garanti à cette équipe le vice-championnat mondial de pentathlon militaire.

MOTS-CLÉ: Profil Dermatoglyphique, Somatotype, Qualités Physiques de Base.

LA IDENTIFICACIÓN DE LOS PERFILES DERMATOGLÍFICO Y SOMATOTÍPICO Y DE LAS CALIDADES FÍSICAS BÁSICAS QUE CARACTERIZAN ATLETAS DE PENTATLÓN MILITAR MASCULINO DE ALTO RENDIMIENTO EN BRASIL

RESUMEN

El presente estudio tuvo por objetivo identificar las características del perfil dermatoglífico y somatotípico y de las calidades físicas que caracterizan atletas de pentatlón militar masculino de alto rendimiento en Brasil. En la elaboración de este trabajo, se llevó en cuenta como muestra los 06 atletas seleccionados por la Comisión Deportiva Militar de Brasil (CDMB), que disputaron el campeonato mundial de pentatlón militar del Consejo Internacional de Deportes Militares (CISM). La implicación práctica en la identificación del perfil del pentatlón militar en Brasil se coadunó con las necesidades de esta modalidad deportiva, pues faltan, en nuestro país, informaciones con respecto a este deporte lo cual es cuatro veces campeón del CISM y se encuentra con su equipo en renovación. Se necesita pues de datos que sirvan de estándares para futuras invocaciones y desarrollo de nuevos valores. El grupo fue sometido a una evaluación para identificación del perfil dermatoglífico, por medio de las impresiones digitales (ID), según el protocolo de Cummins & Midlo (1942), a una evaluación del somatotipo, por el método antropométrico de Heath-Carter (1967) y a testes para evaluar a las siguientes calidades físicas, según los protocolos de los testes: coordinación, Teste de Burpee, Johnson & Nelson (1979); velocidad, teste de carrera de 50 metros lanzados, Johnson & Nelson (1979); fuerza explosiva de miembros inferiores, Sargent Jump teste, Johnson & Nelson (1979); fuerza explosiva de miembros superiores, Two Hand Medicine Ball Put, Johnson & Nelson (1979); resistencia aeróbica, Léger-Boucher, Léger e Boucher (1980); agilidad , Shuttle Run, Johnson & Nelson (1979); flexibilidad, Seat and Reach Test, Johnson & Nelson (1979) y resistencia anaeróbica, Teste de Carrera de 40 segundos, Matsudo (1979). En la identificación del perfil dermatoglífico, fueron elaboradas las características de los modelos de las impresiones digitales para atletas de pentatlón militar de alto rendimiento, que incluyen los índices más informativos e integrales: D10= 9,20 ± 2,17; SQTL= 82,3 ± 42,34; L= 7,60 ± 1,52; W = 0,67 ± 0,52 e A= 1,33 ± 1,75, o sea, la predominancia de presilla (L) y la baja presencia de verticilo (W). También fueron establecidos los tipos predominantes de fórmula digital: AL = 16,7 %; L>W = 33,3 %, 10L = 16,7 % e ALW = 33,3 %. En la identificación del perfil somatotípico, fueron presentadas a las características del grupo investigado, según los tres componentes del somatotipo de Heath-Carter, cuales sean: endomorfía = 1,51 ± 0,17; mesomorfía = 5,55 ± 1,03 e ectomorfía = 2,2 ± 0,57. Estos valores caracterizan el grupo investigado como meso-ectomórfico. Con respecto a las calidades físicas el equipo presentó los siguientes resultados: coordinación 16,67 +/- 0,52 partes, velocidad 5,81 +/- seg, fuerza explosiva de miembros inferiores 59,33 +/- 6,46 cm, fuerza explosiva de miembros superiores 5,08 +/- 0,21 cm, resistencia aeróbica 66,47 +/- 3,25 ml (kg.min^{-1}), agilidad 9,03 +/- 0,17 seg, flexibilidad 52 +/- 4,11 cm y resistencia anaeróbica 296,50 +/- 4,04 m. Estos resultados aplicados a la modalidad deportiva garantizaron a este equipo el subcampeonato mundial de pentatlón militar.

PALABRAS-LLAVE: Perfil Dermatoglífico, Somatotipo, Calidades físicas básicas.

IDENTIFICAÇÃO DOS PERFIS DERMATOGLÍFICO E SOMATOTÍPICO E DAS QUALIDADES FÍSICAS BÁSICAS QUE CARACTERIZAM ATLETAS DE PENTATLO MILITAR MASCULINO DE ALTO RENDIMENTO NO BRASIL

RESUMO

O presente estudo teve por objetivo identificar as características do perfil dermatoglífico e somatotípico e das qualidades físicas básicas que caracterizam atletas de pentatlo militar masculino de alto rendimento no Brasil. Ao elaborar este trabalho, considerou-se a como amostra os 06 atletas convocados pela Comissão Desportiva Militar do Brasil (CDMB), que disputaram o campeonato mundial de pentatlo militar do Conselho Internacional de Desportos Militares (CISM). A implicação prática na identificação do perfil do pentatlo militar no Brasil se coadunou com as necessidades desta modalidade esportiva, pois carecem, em nosso país, informações sobre esse esporte que é tetracampeão do CISM e encontra-se com a sua equipe em renovação. Necessita-se de dados que sirvam de parâmetros para futuras convocações e desenvolvimento de novos valores. O grupo foi submetido a uma avaliação para identificação do perfil dermatoglífico, por meio das impressões digitais (ID), segundo o protocolo de Cummins & Midlo (1942), a uma avaliação do somatótipo, pelo método antropométrico de Heath-Carter (1967) e a testes para avaliar as seguintes qualidades físicas, segundo os protocolos dos testes: coordenação - Teste de Burpee; velocidade - Teste de corrida 50 metros lançados; força explosiva de membros inferiores - *Sargeant Jump test*; força explosiva de membros superiores - *Two Hand Medicine Ball Put*; agilidade - *Shuttle Run*; flexibilidade - *Seat and Reach Test* (Johnson & Nelson, 1979); resistência aeróbica (Léger & Boucher, 1980); e resistência anaeróbica - Teste de Corrida de 40 segundos (Matsudo, 1979). Na identificação do perfil dermatoglífico, foram elaboradas as características dos modelos das Impressões Digitais para atletas de pentatlo militar de alto rendimento, que incluem os índices mais informativos e integrais: D10= 9,20 ± 2,17; SQTL= 82,3 ± 42,34; L= 7,60 ± 1,52; W = 0,67 ± 0,52 e A= 1,33 ± 1,75, ou seja, predominância de presilha (L) e baixa presença de verticilo (W). Também ficaram estabelecidos os tipos predominantes de fórmula digital: AL = 16,7 %; L>W = 33,3 %, 10L = 16,7 % e ALW = 33,3 %. Na identificação do perfil somatotípico, foram apresentadas as características do grupo investigado, segundo os três componentes do somatótipo de Heath-Carter, quais sejam: endomorfia = 1,51 ± 0,17; mesomorfia = 5,55 ± 1,03 e ectomorfia = 2,2 ± 0,57. Tais valores caracterizam o grupo investigado como meso-ectomórfico. Acerca das qualidades físicas básicas a equipe apresentou os seguintes resultados: coordenação 16,67 +/- 0,52 partes, velocidade 5,81 +/- seg, força explosiva de membros inferiores 59,33 +/- 6,46 cm, força explosiva de membros superiores 5,08 +/- 0,21 cm, resistência aeróbica 66,47 +/- 3,25 ml (kg.min^{-1}), agilidade 9,03 +/- 0,17 seg, flexibilidade 52 +/- 4,11 cm e resistência anaeróbica 296,50 +/- 4,04 m. Tais resultados aplicados à modalidade esportiva garantiram a essa equipe o vice-campeonato mundial de pentatlo militar.

PALAVRAS-CHAVE: Perfil dermatoglífico, Somatotipo, qualidades físicas básicas, pentatlo militar.