29 - DIAGNOSIS OF THE GENETIC POTENTIAL OF THE BRAZILIAN ELECTION OF CANOEING SLALOM THROUGH THE DERMATOGLYPHIA.

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Introduction

The Slalom is practiced in rivers with rapids, in a passage that varies between 250 and 400 meters. Through suspended handles they are hung up to 25 doors that must be exceeded in the numerical sequence and the direction - the favor and against the rapids - indicated. Each touch of the canoeist, boat or I row in any one of the beacons adds 2 seconds to its time. The ticket for the door does not imply in 50 seconds.

That one that to make the lesser time - descending more penalties of two successive descending is the winner.

The objective of the competition of slalom is to go down a track of river of rapids, defined for doors, without lacks, in the lesser possible time. Seen the necessity to prescribe more specific training, in the election of new athletes and the detention of talents sportive for the canoeing, we use the dermatoglyphia of Fernandes Filho (1997) to diagnosis the profiles genetic and stops in supporting and justifying them more specific planifications and periodizacion.

Some national studies had been carried through with intention to verify the dermatoglyphics profile of athlete of high level in diverse sportive modalities as: futsal, Silva Dantas & Fernandes Filho, (2002); volleyball, Medina & Fernandes Filho, (2002); triatlo, Angels, et al. (2003); Olympic Gymnastics, João & Fernandes Filho, (2002); soccer of field, Castanhede et al, (2003); runners of resistance, Oak et al (2003); soldiers parachutist, cited for Cunha & Fernandes Filho, (2004); masculine swimming, cited for Cunha & Fernandes Filho, (2004); feminine swimming, cited for Cunha & Fernandes Filho, (2004); military exefex, cited for Cunha & Fernandes Filho, (2004); masculine acrobatic springboard, cited for Cunha & Fernandes Filho, (2004); karatê, cited for Cunha & Fernandes Filho, (2004); karatê-do kata-shubo-du-ryu, Ferreira & Fernandes Filho, (2005); fighter pilots, cited for Cunha & Fernandes Filho, (2004); Orientation, Ferreira & Fernandes Filho, (2004); infantile futsal, cited for Cunha & Fernandes Filho, (2004); pentatlo to militate, Silva et al, (2003); volleyball collegiate, Ferreira & Fernandes Filho, (2005); volleyball feminine, Silva et al, (2003); handball feminine, cited for Cunha & Fernandes Filho, (2004); handball masculine, Ferreira & Fernandes Filho, (2005); e handball beginning, cited for Cunha & Fernandes Son, (2004); it brandishes, Cunha & Fernandes Filho, (2004); among others not less important.

Analysis and auto classification of indices of fingerprints, and of more than eighty indices somatic-functionaries of athlete of high qualification of Russia, forms five main clans (Table 01), that they are distinguished for the dominant different functionary, in way that the intensity low of drawings (D10) and low the it adds of the amount of lines (SQTL) if correlates with high level of manifestations of force and power, but with low level of coordination and resistance. On the other hand, the rise of the level of measured D10 and SQTL in great is correlated with the reinforcement of the dominant one of the resistance and the coordination. The maximum values of D10 and SQTL are guided for the accentuation of the coordinating qualities of the organism (Nikitiuk & Gladisheva, 1989; Abramova, Nikitina & Ozolin (1995); the level of D10, increasing of the parcel of simple drawings (A,L), reduction of the parcel of complicated drawings (W, S-drawing) and the increase of the SQTL - sportive modalities with high power and short time of accomplishment; the high of D10 of 90-50% of the parcel of W increase and, absence, level increase of the SQTL - sportive modalities differences in groups: speed - resistance, games - fights. The modalities of force and speed sport be situated in the field of low values of D10 and the SQTL; the modalities with the complex propriocepção - in the field of high values; the groups of resistance sports occupy the intermediate position. All modalities of games present the same trend: the difficulties of the functions in the game, the magnifying of the field of activity of game if correlates with the complication of). digital drawings, increase of D10 and the amount of lines, increase of the percentage of incidence of drawings (W, S-drawing), with the reduction of the percentage of incidence of L with and of the disappearance.

The Canoeing Slalom, for without one proves of much technique, needs that the athlete is provided with: coordination, resistance of speed, explosive force, anaerobic resistance, speed of acíclicos movements, speed of reaction, dynamic force, balance and flexibility. Visa these necessities; with the genetic profile of each athlete we can mount a training program I specify and individualized, developing the found physical qualities.

E being able to give more emphasis in which has a characterized lesser percentage. Thus, allied the physical qualities, the fingerprints are genetic marks that can serve of pointers of the main parameters of endow and motor talents, differentiating not only the specific functional characteristics for each sportive modality, but also the joust specialization in this modality.

Table 1: Classification of the set of the dermatoglyphics indices and indices somatic - functional between athlete of high qualification - ABRAMOVA et al, (1995).

Classe	Impressões Digitais		Somático – funcionais	
	D10	SQTL	Mínimo	Máximo
I	5,5	26,5	Altura Força (absoluta) Resistência Coordenação	Força (relativa)
II	9,0	47,7	Coordenação	Força
III	11,6	126,4	Força (relativa)	Altura Força (absoluta)
IV	13,1	134,2	Altura Força (absoluta)	Resistência Coordenação
V	17,5	162,8	Força (relativa)	Coordenação

Font: Abramova apud Fernandes Filho (1997).

Objective

This research searchs to diagnosis the genetic profile of the athletes of the Brazilian Election of Canoeing Slalom through the dermatoglyphia. The present work takes care of to the norms for the accomplishment of research with human beings, as the orientation of the National Advice of Health, respecting itself the Lines of direction and Norms Regulate of the Research involving human beings, effective from 10 of October of 1996, Resolution nº 251, and approved in the Committee of Ethics in Research of the UCB/RJ.

Materials and Methods

For this study 15 athletes of high income, integrant of the Brazilian Election of Canoeing Slalom, all volunteers had been selected of intentional form, with age of 17,9 ± 3,29 years. Flegner & Days (1995), samples in accordance with chosen of intentional form are necessary when it is needed that the participant individuals present similar characteristics. For the characterization of the sample the verifications of age had been carried through, weight and height. For the determination of the type of muscular fiber the method Dermatoglyphic de Cummins & Midlo was chosen apud Fernandes Filho (1997). For the verification of the weight and stature a scale with estadiometer was used (Filizola-Brazil). For the verification of the fingerprints a microporous digital cushion was used, model 250 (Impress-Brazil) was analyzed through the descriptive statistics, in which the average values and derivatives for the values of continuous nature had been observed. The diagnostic of the potentials genetic was evaluated by dermatoglífico method (Cummins; Midlo, 1942 apud Fernandes Filho, 1997). The method of dermatoglifia called collection detects the fingerprints and carries through, later, its processing. In this process three drawings are presented: the Arc (A) - drawing without deltas, and characterizes for the absence of tirades or deltas; the Fastener (L) - drawing that possesses a delta and the Verticilo (W) - drawing that possesses two deltas.

Table 2: Characteristic of the Population

|	N	Idade	Peso	Estatura
X	15	17,9	65,4	170,3
S	15	3,29	6,47	6,16
Min.	15	15,00	55,00	161,00
Max.	15	27,00	81,00	190,00

Results

The following results had been gotten: the C1 was established to digital formula L>W=66,7%, AL=33,3%, SQTL=116 and D10=11,7; the group C2 L>W=50%, AL=25%, 10L=25%, SQTL=131,5 and D10=10,2 and group K1 L>W=37,5%, L=W=37,5%, ALW=12,5%, 10L=12,5%, SQTL=153,9 and D10=13,4. With in the results we observe that: the athletes of C1 present low SQTL and D10, what she characterizes the explosive force and low coordinative index (SQTL/D10), confirmed for the SQTL=116 and D10=11,7. The C2 group presents speed with resistance, explosive force and moderate coordinative index (SQTL/D10), confirmed for D10=10,2 and SQTL=131,5 and the K1 group presents of speed with resistance, complex propriocepção, being the predominant speed as changeable confirmed by SQTL=153,9 D10=13,4 and L>W. The C1 group presents as characteristic important for canoeing slalom, the force and power, the group C2 and K1 present the explosive force and special complex propriocepção and in the K1 group the predominance of the speed. We observe that each group presents different genetic characteristics demonstrated by the dermatoglyphia, this being a tool for optimization of the orientation, election and in the lapsing of the training in the canoeing of slalom.

We still observe an increasing scale in relation to the SQTL of the following form, C1, K1 and C2. Observed that the C1 groups possess the lesser SQTL that the groups K1 and C2, and in turn the K1 group possesses the lesser SQTL that C2. The coordinative index is represented by the division of the SQTL for the D10 being thus in same increasing ratio that the SQTL also grows the IC grows. The C1 group presents as mirror, the deltas, of fingers MET3 - MDT3 and MET5 - MDT5. The group of K1 only presents as mirror, the deltas, fingers MET4 - MDT4. However, the group of C2 present as mirror, the deltas, fingers MET2 - MDT2, MET4 - MDT4 and MET5 - MDT5; what in it transfers the knowledge to them of bigger motor coordination in increasing ratio to the biggest number of fingers in mirror.

In all the groups have a predominance of interesting drawing L. Since for the canoeing very slalom, since the biggest frequency of drawing L, represent the biggest amount of glicolytics staple fibers according to Sting, (2004). The averages of the group of presence of drawing L are the following ones: C1=7,66 group; K1=12,75 group and C2=9,25 group; all the groups in general present characteristics of type of glicolytics fiber type IIA. The group C1, K1 and C2 presents the predominance speed presented for the presence of drawing L.

Graphical 1: Graphical Radar of the Fernandes Filho, 1997
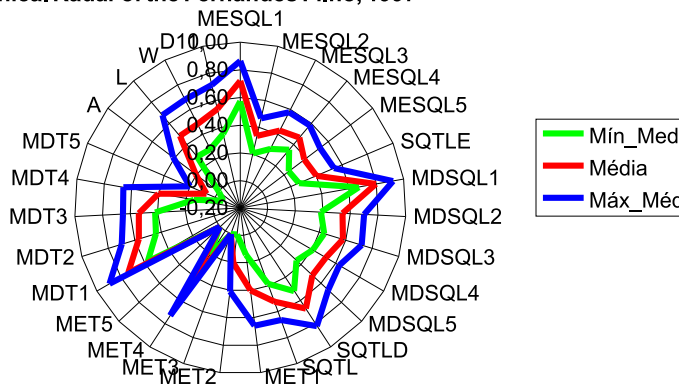
Conclusion

We conclude that the studied groups very present interesting characteristics for practical of high level in the canoeing slalom, and thus can directly apply these data in the training, designing in more specific and individualized way. Still, we can develop the election and detention of possible sportive talents, through the identified parameters. We can also conclude that the dermatoglyphia presents genetic direct applicability as marking. This data already are proven. On the basis of the results of its genetic potentials, the training will be able to reach more specific objectives. Not obstinate, it is considered interference of the way (phenotype), which can influence, as changeable controlled limit. We recommend that more research is carried through.

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DIAGNOSIS OF THE GENETIC POTENTIAL OF THE BRAZILIAN ELECTION OF CANOEING SLALOM THROUGH THE DERMATOGLYPHIA.

ABSTRACT

Objective of the study is to diagnosis the genetic profiles of the Brazilian election of canoeing slalom through the dermatoglyphia. Analyzed through the descriptive statistics and following dermatoglyphics analysis of Cummins & Midlo (1942). Population was composed for the athletes of the Brazilian election of permanent, masculine canoeing slalom, being N=15, C1(N=3), C2(N=4) and K1(N=8). Resulted: the C1 was established to digital formula AL=66,7%, L>W=33,3%, SQTL=116 and D10=11,7; the group C2 L>W=50%, AL=25%, 10L=25%, SQTL=131,5 and D10=10,2 and group K1 L>W=37,5%, L=W=37,5%, ALW=12,5%, 10L=12,5%, SQTL=153,9 and D10=13,4. For the results we observe that: the C1 presents characteristics of speed with resistance, predominating the speed, explosive force confirmed by the SQTL=116 and D10=11,7. The C2 presents speed with resistance, explosive force and moderate coordinative index (SQTL/D10), confirmed for D10=10,2 and SQTL=131,5 and the K1 presents speed with resistance, predominating the speed and complex propriocepção confirmed by the SQTL=153,9, D10=13,4 and L>W=37,5%. **Key Words**: Canoeing, Slalom and Dermatoglyphia.

DIAGNOSTIC DU POTENTIEL GÉNÉTIQUE DE L'CÉIECTION BRÉSILIENNE DE CANOEING SLALOM PAR LE DERMATOGLYPHIA.

RÈSUMÉ

L'objectif d'cAbstrait de l'étude est au diagnostic les profils génétiques de l'élection brésilienne du slalom de canoeing par le dermatoglyphia. Analysé par les statistiques descriptives et après analyse de dermatoglyphics de Cummins et de Midlo (1942). La population s'est composée pour les athlètes de l'élection brésilienne de la constante, slalom canoeing masculin, étant N=15, C1(n=3), C2(n=4) et K1(n=8). a résulté: le C1 a été établi à la formule numérique AL=66,7%, L>w=33,3%, au SQTL=116 et au D10=11,7; le groupe C2 L>w=50%, AL=25%, 10L=25%, SQTL=131,5 et D10=10,2 et groupe K1 L>w=37,5%, L=w=37,5%, ALW=12,5%, 10L=12,5%, SQTL=153,9 et D10=13,4. Pour les résultats nous observons cela: le C1 présente des caractéristiques de vitesse avec la résistance, prédominantes la vitesse, la force explosive confirmée par le SQTL=116 et le D10=11,7. Le C2 présente la vitesse avec la résistance, force explosive et l'index coordonnateur modéré (SQTL/d10), confirmé pour D10=10,2 et SQTL=131,5 et le K1 présente la vitesse avec la résistance, prédominante la vitesse et le propriocepção complexe confirmée par le SQTL=153,9, le D10=13,4 et le L>w=37,5%. **Mots clés**: Canoeing, Slalom et Dermatoglyphia.

DIAGNOSIS DEL POTENCIAL GENÉTICO DE LA ELECCIÓN BRASILEÑA DE CANOEING SLALOM CON EL DERMATOGLYPHIA.

RESUMEN

El objetivo del estudio es a la diagnosis los perfiles genéticos de la elección brasileña del slalom canoeing con el dermatoglyphia. Analizado con la estadística descriptiva y después del análisis del dermatoglyphics de Cummins y de Midlo (1942). Compusieron a la población para los atletas de la elección brasileña de la permanente, slalom canoeing masculino, siendo N=15, C1(N=3), C2(N=4) y K1(N=8). resultó: el C1 fue establecido al fórmula digital el AL=66,7%, el L>W=33,3%, a SQTL=116 y a D10=11,7; el grupo C2 el L>W=50%, el AL=25%, el 10L=25%, SQTL=131,5 y D10=10,2 y grupo K1 el L>W=37,5%, el L=W=37,5%, el ALW=12,5%, el 10L=12,5%, SQTL=153,9 y D10=13,4. Para los resultados observamos eso: el C1 presenta las características de la velocidad con resistencia, predominantes la velocidad, la fuerza explosiva confirmada por el SQTL=116 y el D10=11,7. El C2 presenta velocidad con la resistencia, fuerza explosiva y el índice coordinativo moderado (SQTL/D10), confirmado para D10=10,2 y SQTL=131,5 y el K1 presenta velocidad con la resistencia, predominante la velocidad y el propriocepção complejo confirmada por el SQTL=153,9, el D10=13,4 y el L>W=37,5%. **Palabras claves:** Canoeing, Slalom y Dermatoglyphia.

DIAGNÓSTICO DO POTENCIAL GENÉTICO DA SELEÇÃO BRASILEIRA DE CANOAGEM SLALOM ATRAVÉS DA DERMATOGLIFIA.

RESUMO

Objetivo do estudo é diagnosticar os perfis genéticos da seleção brasileira de canoagem slalom através da dermatoglifia. Analisado através da estatística descritiva e seguindo análise dermatoglífica de Cummins & Midlo (1942). População foi composta pelos atletas da seleção brasileira de canoagem slalom permanente, masculina, sendo N=15, C1(N=3), C2(N=4) e K1(N=8). Resultados: o C1 foi estabelecida à fórmula digital AL=66,7%, L>W=33,3%, SQTL=116 e D10=11,7; o grupo C2 L>W=50%, AL=25%, 10L=25%, SQTL=131,5 e D10=10,2 e grupo K1 L>W=37,5%, L=W=37,5%, ALW=12,5%, 10L=12,5%, SQTL=153,9 e D10=13,4. Pelos resultados observamos que: os C1 apresentam características de velocidade com resistência, predominando a velocidade, força explosiva confirmados pelo SQTL=116 e D10=11,7. O C2 apresenta velocidade com resistência, força explosiva e índice coordenativo moderado (SQTL/D10), confirmado pelo D10=10,2 e SQTL=131,5 e o K1 apresenta velocidade com resistência, predominando a velocidade e propriocepção complexa confirmados pelo SQTL=153,9, D10=13,4 e L>W=37,5%. **Palavras-chave:** Canoagem, Slalom e Dermatoglifia.