**50 - INJURIES RESULTING FROM MARTIAL ARTS PRACTICE**

SEBASTIÃO FRANCISCO GONÇALVES
IESFI – AEI – FOZ DO IGUAÇU – PARANÁ – BRASIL
RAFAELA DAL PIVA
IESFI – FOZ DO IGUAÇU – PARANÁ – BRASIL
PEDRO FERREIRA REIS
IESFI – FOZ DO IGUAÇU – PARANÁ - BRASIL
franciscogonalveschico@hotmail.com

doi:10.16887/88.a1.50

1. INTRODUCTION.

From antiquity the struggle is part of the daily life of man as a means of self-defense for various goals and situations. The earliest evidence of organized forms of combat emerged in India and China, several stories surround the struggles and their modalities, styles, systems and forms. In India, the genre was developed through the mediation of Buddhist monks who were not allowed to use weapons, but had to create defense mechanisms against invaders by devising a self-defense system (GRACIE, 2008).

The origin of the Fights and Martial Arts travels different paths and that still challenge scholars and researchers about their real appearance, there are many reports and facts adopted on the concepts. In the National Curricular Parameters defines the concept of fights are disputes in which opponents use techniques and strategies of imbalance, contusion, immobilization or exclusion of a combat area, characterized by specific regulations in order to punish attitudes of violence and disloyalty to the development of attack and defense actions (BRASIL, 1998).

A modality that adopts a discipline as rigid rules of conduct and non-violence, as the intention to combat attitudes of violence and disloyalty, which contribute to the moral formation of the individual. With these characteristics the practice of martial arts attracts students and athletes, as well as contribute to health and well-being stimulates self-confidence (PACHECO, 2012).

The practice of the martial arts modality can cause injuries to athletes and students, but there are programs that assist in prevention, offering specific physical works to improve muscle performance, coordination, balance and proprioception. According to Simões (2005), it is possible to adopt preventive and / or curative measures to reduce the problems that may arise from knowing the causes that lead to an increase in the incidence of sports injuries. The damages that occur in the practice of physical activity should be reevaluated in order to avoid or reduce the occurrence of injuries in practice, physical education professionals, physiotherapists, educators should be aware of the factors for adopting measures for preventive actions (CUNHA , 2016).

Due to the great promotion of physical activities the demand for the martial arts modality has grown in the country, with that there should be the concern to know statistical bases on the possible injuries that arise during the practice (THOMAS, NELSON, 2002). The rich and benefits that the practice favors to each individual should be studied so that investments in programs of incentive to the sport that really are significant for the practitioners take place (SAMPAIO, 2014). In this sense, the present study aimed to perform a detailed analysis based on the literature regarding the incidence of injuries in the modalities of martial arts, in order to point out the occurrences and the possible strategies for the prevention.

2. METHODOLOGY.

For this review, a search of the publications that occurred between the period of 2000 and 2014 was carried out, using the databases available in the Portal of Periodicals of the Coordination of Improvement of Higher Level Personnel (CAPES), for the selection of articles that make it possible to construct a bibliographic reference of the state of art of the subject in question.

The search was carried out in the following databases: Cesufoz Library (Foz do Iguaçu Teaching Center), library of the Uniamérica institution (Union of the Americas Faculty, Foz do Iguaçu), Academic Scielo, Scientific Eletronic Library, Unioeste library , (State University of Western Paraná), Unila Library (Federal University of Latin American Integration).

3. RESULTS AND DISCUSSION.

Next, the main research on injuries in martial arts practice will be presented in Table 01.

| AUTOR/ANO | TITULO | AMOSTRA | RESULTADO |
|---|---|---|---|
| BAFFA, AP, BARROS JR, 2002. | lesões no jiu -jitsu | 41 lutadores | 38 lesões, joelho e cotovelo |
| BARSOTTINI, et,al., 2006. | Lesões em atletas | 245 atletas | 198 lesões nos MMSS |
| BLEDSOE, GH, et al., 2006. | Estudo retrospectivo | 220 lutadores | 78 lesão |
| BARTSH,A.J, et al., 2012. | Estudo Ex perimental | Estudo de Caso | Lesão na Cervical |
| BACKER, et al.,2010. | Relato de caso | Estudo de Caso | Ruptura em LCA |
| KOCHHAR,T, et al.,2005. | Estudo experimental | Estudo de Caso | Lesões na cervical |
| NGAI,KM, et al.,2008. | Estudo retrospectivo | 1270 atletas | 300 Lesões nos MMII |
| SLOWEY,M, et al.,2012. | Relato de caso | Estudo de Caso | 01 Infarto cerebelar |

**Table 01** – Profile of Martial Arts Injuries.

The results presented by body regions pointed in the head and neck as the most affected, and of the types of lesions found in this region, concussion was the most reported. Concussion is a form of mild cranioencephalic trauma and defined as a complex pathophysiological process induced by traumatic biomechanical forces that affect the brain (BARBOSA, 2011).

An interesting finding comes from a case study Slowey et al. (2012) who reported on cerebellar infarction with complete occlusion of the right vertebral artery of a two-day athlete after a training session. Bartsch et al., (2012) studied the proportion of the impact generated in the "hook" movement in boxing, with the use of gloves with and without filling on the head of the fighter with and without protection, the research showed that the amount of force generated in the rotation of the head is very large, in the two modalities, when there is the use of a protective helmet by the fighter.

In the cases mentioned above it was noted the importance of using equipment that protects athletes against high-risk

injuries, such as brain and cervical lesions, which can lead to concussion, tetraplegia and even death. Another region very affected by injuries is the lower limbs. Of the types of injuries cited, the rupture of the anterior cruciate ligament of an athlete after a heel switch draws more attention (BAKER et al., 2010).

The "Heel Key" is a type of knee wrench used in some martial arts focusing on the opponent's knee and making him admit defeat. Reports on knee trauma are lacking as a result of this technique (BAKER et al., 2009 ), Who report that reports of knee trauma due to the use of this technique are scarce, as well as the use of other techniques that must also be analyzed to ensure that the athlete stays for a longer time in competitions.

The monitoring of the growth of martial arts practice and investigations on the modality is necessary worldwide, because of the articles found in this review 9 are North American, one Irish and one Australian.

4. CONCLUSION.

It is concluded with this research that the most affected regions of the body were in the head and neck, among the types of injuries reported, mainly found in this region was in the head with brain injury. It was evidenced that combat sports or contact has high risk of severe injuries, becoming irreversible in some cases. Further studies are suggested in this follow-up, which should analyze the types of protection equipment with technical evaluation of the blows. Therefore, it hopes to decrease in the future incidence of injury that affects athletes practicing martial arts, as besides physical damages also psychological and emotional damages. In this way, make all practitioners of martial arts aware of the regulations of their respective arts, as well as always develop the spirit of competition and ethics.

BIBLIOGRAPHIC REFERENCES

BRASIL, Secretaria de Educação Fundamental. Parâmetros Curriculares Nacionais: Educação Física/Secretaria de Educação Fundamental – Brasília: MEC/SEF. 1998 pia Brasil,v.3,n.6,p.377-381,2002

BAFFA, AP, BARROS JR. As principais lesões no jiu-jitsu. Fisioterapia Brasil,v.3,n.6,p.377-381,2002.

BARSOTTINI, DANIEL; GUIMARAES, ANDERSON EDUARDO; MORAIS,PAULO ROBERTO DE. Relação entre técnicas de lesões em praticantes de judô. Rev. Bras. Med. Esporte. Niterói, v.12n,1,p.56 – 60.2006.

BARBOSA, M. (2011). A concussão cerebral no desporto. Revista Medicina Esportiva Informa, v.2 n,6,p14-16,2011.

BAKER, J. F., DEVITT, B. M., & MORAN, R. Anterior cruciate ligament rupture secondary to a “heel hook”: a dangerous martial arts technique. Knee Surg Sports Traumatol Arthrosc, v.44,n12,p, 115 – 116, 2010

BARTSCH, A., BENZEL, E., & MIELE, V. Boxing and mixed martial arts: preliminary traumatic neuromechanical injury risk analyses from laboratory impact dosage data. Journal of Neurosurg, v.116, p,1070 – 1080, 2012.

BUSE,G,J. no horods barred sport fighting: a yer rewiew of mixed martial arts competition. Bristich journal of sports medicine,v42,n.2,p,169-172,2006.

BLEDSOE,G.,HSU,E., GRABOWSKI,J.,BRILL,J.,& LI,G. Incidence of injuri in professional mixed martial arts competitions.Eye,p136-142, 2006.

CARAZZATTO, J.G;GABRIT H; CASTROPIL W. Repercussão no aparelho locomotor da prática do judô de alto nível. v.12,I 9857-9869,1996.

GRACIE, Reila. O criador de uma dinastia. Rio de Janeiro, 2008.

KOCHHAR, T., BACK, D. L., MANN, B., SKINNER, J. Risk of cervical injuries in mixed martial arts. British journal of sports medicine, v.39,n7,p 444–447, 2005

NGAI, K. M., LEVY, F., HSU, E. B. (2008). Injury trends in sanctioned mixed martial arts competition: a 5-year review from 2002 to 2007. British journal of sports medicine, v.42,n,8,p,686–689-2002, 2007

PACHECO,RENAN LEMOS. A influência da pratica das Artes marciais na Redução da Agressividade em Adolescente, nas Aulas de Educação Física. Polemica,2012

SLOWEY, M., MAW, G., FURYK, J. Case report on vertebral artery dissection in mixed martial arts. Emergency Medicine Australasia, v.24,n,2,p203–206, 2012

SAMPAIO, Natanael Vaz Juniro. Memória oriental das artes marciais em solo brasileiro. Projeto História. Revista do Programa de Estudos Pós-Graduados de História. e-ISSN 2176-2767; ISSN 0102-4442, v.49, 2014.

SIMÕES, NV. N. Lesões Desportivas em Praticantes de Atividades Físicas: Uma revisão bibliográfica. Revista Brasileira de Fisioterapia, 2005.

THOMAS, J.R.; NELSON, J.K. Métodos de pesquisa em atividade física. Porto Alegre, Artmed Editora, v. 3, 2002.

INJURIES RESULTING FROM MARTIAL ARTS PRACTICE

The practice of martial arts can cause injuries to athletes and students, but there are programs that aid in prevention, offering specific physical work to improve muscle performance, coordination, balance and proprioception. This study aimed to perform a detailed analysis based on the literature regarding the incidence of injuries in martial arts modalities, in order to point out the occurrences and possible strategies for prevention. The results showed that the practice of martial arts, causes lions of the lower and upper limbs, and can cause damage to athletes' health. It is concluded with this research that the regions most affected of the body were in the head and cervical, among the types of injuries reported, mainly found in this region was in the head with brain injury. It was evidenced that combat sports or contact has high risk of severe injuries, becoming irreversible in some cases. Further studies are suggested in this follow-up, which should analyze the types of protection equipment with technical evaluation of the blows. Therefore, it hopes to decrease in the future incidence of injury that affects athletes practicing martial arts, as besides physical damages also psychological and emotional damages. In this way, make all practitioners of martial arts aware of the regulations of their respective arts, as well as always develop the spirit of competition and ethics.

Keywords: Fights; martial arts; lesion

BLESSURES RÉSULTANT DE LA PRATIQUE DES ARTES MARTIAUX

La pratique des arts martiaux peut causer des blessures aux athlètes et aux étudiants, mais il existe des programmes qui aident à la prévention, offrant un travail physique spécifique pour améliorer la performance musculaire, la coordination, l'équilibre et la proprioception. Cette étude visait à effectuer une analyse détaillée basée sur la littérature sur l'incidence des blessures dans les modalités des arts martiaux, afin d'identifier les événements et les stratégies possibles de prévention. Les résultats ont montré que la pratique des arts martiaux, cause des lions des membres inférieurs et supérieurs et peut causer des dommages à la santé des athlètes. On conclut avec cette recherche que les régions les plus touchées du corps étaient dans la tête et cervicales, parmi les types de blessures rapportées, principalement dans cette région était dans la tête avec une lésion cérébrale. Il a été démontré que les sports de combat ou les contacts présentent un risque élevé de blessures graves, devenant

irréversibles dans certains cas. D'autres études sont suggérées dans ce suivi, qui devrait analyser les types de matériel de protection avec une évaluation technique des coups. Par conséquent, il espère diminuer l'incidence future de la blessure qui affecte les athlètes qui pratiquent les arts martiaux, outre les dommages physiques, également des dommages psychologiques et émotionnels. De cette façon, sensibiliser tous les praticiens des arts martiaux à la réglementation de leurs arts respectifs, ainsi que développer toujours l'esprit de compétition et d'éthique.

Mots-clés: Combats; arts martiaux; blessure

LESIONES RESULTANTES DE LA PRÁCTICA DE ARTES MARCIALES

La práctica de la modalidad de artes marciales puede causar lesiones en sus atletas y alumnos, pero existen programas que auxilian en la prevención, ofreciendo trabajos físicos específicos para mejorar el desempeño muscular, coordinación, equilibrio y propriocepción. Este estudio tuvo como objetivo realizar un análisis detallado con base en la literatura referente a la incidencia de lesiones en las modalidades de artes marciales, a fin de apuntar las ocurrencias y las posibles estrategias para la prevención. Los resultados mostraron que la práctica de artes marciales, ocasiona leones de los miembros inferiores y superiores, pudiendo causar daños en la salud de los atletas. Se concluye con esta investigación que las regiones más afectadas del cuerpo fueron en la cabeza y cervical, entre los tipos de lesiones relatadas, principalmente encontrados en esa región fue en la cabeza con lesión cerebral. Se evidenció que los deportes de combate o contacto tienen alto riesgo de lesiones severas, llegando a ser irreversibles en algunos casos. Se sugieren más estudios en este seguimiento los cuales deberán ser analizados los tipos de equipos para protección con evaluación técnica de los golpes. Siendo así, espera disminuir en la futura incidencia de lesión que afecta a los atletas practicantes de artes marciales, pues además de los daños físicos también los daños psicológicos y emocionales. De esta manera, concientizar a todos los practicantes de artes marciales a seguir los reglamentos de sus respectivas artes, así como desarrollar siempre el espíritu de competencia y ética.

Palabras clave: Luchas; Artes marciales; lesiones

LESÕES RESULTANTES DA PRÁTICA DE ARTES MARCIAIS

A prática da modalidade de artes marciais pode causar lesões em seus atletas e alunos, porém existem programas que auxiliam na prevenção, oferecendo trabalhos físicos específicos para melhorar o desempenho muscular, coordenação, equilíbrio e propriocepção. Este estudo visou realizar uma análise detalhada com base na literatura referente à incidência de lesões nas modalidades de artes marciais, a fim de apontar as ocorrências e as possíveis estratégias para a prevenção. A pesquisa foi realizada

Os resultados apresentaram que a prática de artes marciais, ocasiona leões dos membros inferiores e superiores, podendo causar danos na saúde dos atletas. Conclui-se com esta pesquisa que as regiões mais afetadas do corpo foram na cabeça e cervical, entre os tipos de lesões relatadas, principalmente encontrados nessa região foi na cabeça com lesão cerebral. Ficou evidenciado que os esportes de combate ou contato possui alto risco de lesões severas, chegando ser irreversíveis em alguns casos. Sugerem-se mais estudos neste seguimento os quais deverão ser analisados os tipos de equipamentos para proteção com avaliação técnicas dos golpes. Sendo assim, espera diminuir no futuro incidência de lesão que afeta os atletas praticantes de artes marciais, pois além dos danos físicos também os danos psicológicos e emocionais. Desta maneira, conscientizar todos os praticantes de artes márcias a seguirem os regulamentos de suas respectivas artes, bem como desenvolver sempre o espirito de competição e ética.

Palavras Chaves: Lutas; artes marciais; lesão.

Sebastião Francisco Gonçalves
Rua: Avenida Maruio Filho, 600 – Apto 01
CEP: 85.856-440
Cidade: Foz do Iguaçu – Paraná – Brasil
Fone: (45) 99930-0109
Email: franciscogonalveschico@hotmail.com