37 - MUSCULOSKELETAL INJURIES DUE TO WORK IN PUBLIC OFFICIALS OF A HOSPITAL

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INTRODUCTION

The worker's health has long been a challenge to be overcome within the context of human health. The repetitive strain injuries (RSI), recently called work-related musculoskeletal diseases (DORT), covering clinical muscle-skeletal system purchased by the employee subject to certain conditions of work (KUORINKA; FORCIER, 1995).

The hospitals, institutions, primarily related to the provision of health services, which aim to care, treatment and cure of those affected by the disease, paradoxically transponder and producers are also a number of risk factors for the health of those who look after the well being of others. There are extensive list of damage to all organ systems arising from the practice of working in a hospital environment, and among them, the skeletal muscle problems are those most frequently affect the teams (JOSEPHSON, 1997). The requirement of a practical intense pace, complexity and responsibility on the tasks performed and psychological pressure to which all employees are submitted make the hospital one of the most affected by occupational diseases (National Social Insurance Board. Statistical bulletin of Occupational Accidents: 1997. Brasília). In addition, the constant need to perform tasks that require inclination of the column, twisting and weightlifting as a pattern maximize the appearance of DORTs this population (CAILLET, 2001).

It is known however that the situations of risk to DORT are not always treated with due importance in hospital settings and neither is implementing measures of educational awareness, adequacy of ergonomic and training environments posture and movements in the correct working practice, in order to avoid the emergence or recurrence of these lesions. (GURGUEIRA, 2003). The national scientific literature covering specifically the muscle-skeletal symptoms in different regions within this population is still inadequate and there is a real need for research to support the articulation and recovery of conduct preventive. Thus, this study aimed to identify the incidence of muscle-skeletal pain related to work in a hospital environment, characterizing the regions most affected body and present risk factors for DORT this environment.

METHODOLOGY

The population of this study was set for 259 employees / workers of all sectors of a public hospital in the city of Balneário Camboriú, SC. Participated in the survey all professionals who were available to answer interview in the morning on day 01, 02 and 03 August 2008.

The sample was composed, therefore, for 28 workers with an average age of 35 years (minimum of 18 and maximum of 55 years), with 26 females and 02 males. The officials discussed were part of the sectors of nursing (post female, post male, isolation, UTI general, pediatrics, maternity and first-aid), catering, maintenance, laundry, cleaning and stretcher-bearer.

Data collection was done through an interview and observation of the practice of work of each of the interviewees. The instrument used was composed of a questionnaire containing 12 questions, consisting of personal data (name, sex, age and profession) and the investigation of complaints of skeletal muscle pain (feels pain, location, time, frequency, in which activity; posture of pain, conducts physical activity, physical activity frequency). The questionnaires were applied in the work environment of each interviewee, is always looking for a quiet place, where he could be explained each issue in order to ensure understanding and to obtain more reliable answers. After the interview the researcher noted the practice of the activities of each interviewee for a period of 15 minutes, making photographic records and describing in a "personal journal" postures and movements adopted the achievements of their duties, which are thought to be a causative agent of DORTs this employee.

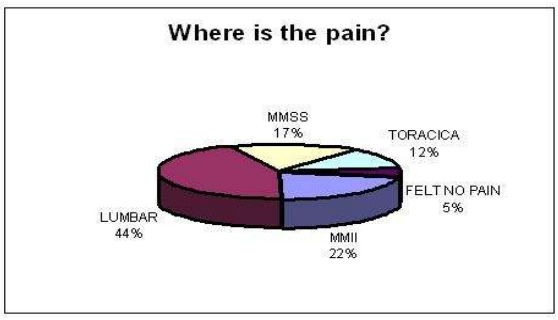
The sections of the questionnaire used in the research were pre-coded and processed by the software Excel 2003. The descriptive analysis of the data was expressed as a percentage minimum and maximum values, through visual analysis of graphs and tables.

All officials interviewed who participated in this study received permission from the ethics committee of the hospital and were informed of the importance of research. Later the results were presented in the form of lectures now being passed guidelines to reduce the causes of occupational diseases in this population.

RESULTS

The chronic pain affects significant portion of the Brazilian population. The demonstrations chronic pain in adults undertake the physical and functional capacity of the individual, reducing the quality of life and resulting increased costs of public health (PESSINI, 2002; OLINTO, 2005). In this study sample 95% of respondents reported being affected by chronic skeletal muscle pain from work, an alarming rate and that deserves study and preventive measures in an emergency.

Graph 1 Where is the pain



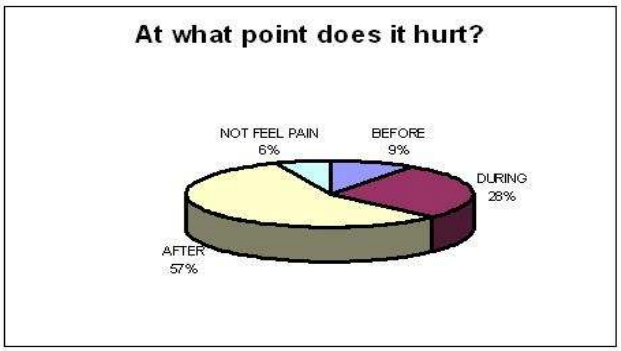
When investigated on the spot where the pain felt (Graph 1), it was noted that the fourth body segments were reported, but the lumbar region of the spine obtained higher frequency of complaints álgicas followed by the involvement of the lower limbs with (sciatalgia) or unrelated with the lumbar segment.

The incidence of low back pain is reaching epidemic levels in the general population, making it a public health problem,

already causing an increase in the cost of expenditure on health care. Polls indicate that 70 to 80% of the population have suffered, or will suffer from back pain at some time in life. (DEYO, 1998; SILVA, FASSA, VALLE; 2004).

In the hospital environment is low back pain and sciatica results from cumulative trauma due to the direct patient care performed particularly the practice of transfers and exchanges of decubitus (ALEXANDRE, 1996; SMEDLEY, 1998).

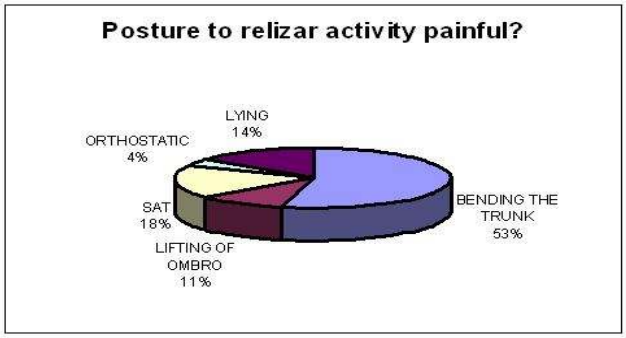
Graph 2 When they feel pain



When investigated on the time when they feel pain (Figure 2) they reported that the pain tables appear in the vast majority during and immediately after work, which shows a practical system with aggressive factors to the musculoskeletal system. For the period surveyed the occurrence of pain is related to the time of execution of tasks, the position adopted, the handling and ergonomic factors exerted during the working day.

Studies have shown that the employee may make frequent pain with lower income and large-hospital medical expenses, absenteeism and beyond the growth of early retirements (SATO, 1996). The prevention of these complications can be done with proper ergonomics of the working environment, proper positioning of the worker during working hours and the maintenance of reasonable flexibility decreases the chance of injury and functional problems (DANTAS; et al., 2002).

Graph 3 Posture to perform painful activity?



When investigated on the stance adopted to feel the painful discomfort (Graph 3), the trunk flexion previous position was the most mentioned by interviewee.

According to various studies of the literature, there is a close relationship between the area most affected by the pain found in this study (lumbar) and trigger posture of pain (trunk flexion).

According to Alexander; et al,(1992) and Bernardina; Mariale; Carvalho, (1996) the pain is related to the work static or repetitive the tasks that require frequent bending and rotation of the column and the number of times a same attitude is adopted in a short space of time.

The repetition of earlier movements and bending of the trunk for a long time lead to excessive tension of muscles antigravitacionais which can cause irritative and inflammatory processes in the structures osteomioarticulares with symptoms like pain, increase of energy consumption and, consequently, muscle fatigue, especially in the lumbar segment vertebral column (KNOPLICH, 1983; GRANDJEAN, HUNTING, 1997). Mooney (2000) adds that roughly 60% of back pain have their origin in the muscles, which are consequences of poor posture, physical exertion, repetitive movements done so inadequate for the tasks of the day, in addition to genetic predisposition. Already in the overhead intervertebral disc, which can lead to the emergence of protusões herniation although less frequent and are also due to incorrect biomechanics in the pursuit of AVDs (KNOPLICH, 1983; GRANDJEAN and HUNTING, 1997). ;)

According to these same authors, works as push, pull, lift, carry objects, even with low weight, can be an agent of the aggressor column, where the movements are not implemented adequately (Mooney 2000, and GRANDJEAN HUNTING, 1997 KNOPLICH, 1983)

These postures and movements were observed by researchers and those interviewed for this study in various activities held during the working day, such as, punching vein, measuring blood pressure when handling patients, transfer and change of decubitus patients, pushing the car of clothes , type on medical records and write reports, get heavy pots, passing cloth on the ground, among others.

Graph 4 Performs physical activity?



The negative effects of inactivity are known for a long time, especially on the skeletal muscle issues. Several studies have been trying to show the interference of physical exercise and sports in the prevention of disabilities and the prevention and sweetening of musculoskeletal pain skeletal muscle (ANDREOTTI, 1999; REBELLATO; MORELLI, 2004; VITTA, 2001; AINSWORTH, 2000). For Andreotti (1999), the exercise are recognized as a factor for longevity and improvement in quality of life, and this result is related both its size about prophylactic curative.

The practice of regular physical exercise is reflected in all aspects of the body, providing benefits for both character physiological, psychological, as in nature social. Regarding the influence of exercise on the pain osteomioarticulares, this reduces the levels of stress, helps in improving their strength and muscle tone, flexibility, and to strengthen the bone structures of the skeleton, factors that need to be healthy not to suffer with painful events.

When the workers of this study were asked about the performance of physical exercise (Graph 4) did not practice the majority reported no physical activity (64%), giving it the extra work and lack of time.

CONCLUSION

The results show that this poll is the high incidence of skeletal muscle symptoms in multiple body regions. The highest incidence of pain affects the lumbar region, and its expression occurs especially during and immediately after work. This represents the largest number of medical consultations by the officials interviewed. The activities carried out in the trunk flexion are the most mentioned as the cause of pain in various industries analyzed. There was also the influence of factors related to ergonomic injuries, which encourage and maximize the performance of movements and inadequate maintenance of poor posture. The officials interviewed did not adopt preventive measures of Dort in their day-to-day, and most of them do not have the habit of doing regular exercise.

Based on the findings of this study, it is believed that a study of awareness of the importance of caring for the stance during the working day, the regular practice of physical exercises, and deployment of a program of gym work associated with the correction of ergonomic furniture are measures of vital importance to decrease the rates of Dort between officials of the hospital.

REFERENCES

AINSWORTH, B. Issues in the assessment of physical activity in woman. **Res. Q. Exerc. Spor**., v.71, n.2, p.37-42, 2000.

ALEXANDRE, N.M.C.; MORAES, M.A.A.; MAHAYRI, N.; CUNHA, S.H.F. **Aspectos ergonômicos e posturais em centro de material**. Rev Esc Enf USP 26 (1): 87-94, 1992.

ALEXANDRE, N.M.C., & ANGERAMI, E.L.S. **Dores nas costas e enfermagem**. Rev Esc Enf USP 30 (2): 267-85, 1996.

ANDREOTTI, R.A. **Efeitos de um programa de Educação Física sobre as atividades da vida diária em idosos**. São Paulo [dissertação]. São Paulo: Escola de Educação Física e Esporte da Universidade de São Paulo; 1999.

BERNARDINA, L.D.; MARZIALE, M.H.P.; CARVALHO, E.C. **Postura corporal adotada pelos membros da equipe de enfermagem durante procedimentos de coleta de sangue, administração de medicação endovenosa e soroterapia**. Rev Esc Enf USP 29 (3): 317-30, 1995.

Brasil. **Ministério da Saúde**. Ato Portaria no19/GM de 03 de janeiro de 2002. [acessado em 30 de setembro 2008]. Disponível em: http://dtr2001.saude.gov.br/sas/ PORTARIAS/Port2002/Gm/GM-19.htm

CAILLIET, R.;. **Síndrome da Dor Lombar**. 5a.ed. Porto Alegre: Artmed, 2001.

DANTAS, et al. Força e flexibilidade: efeito do treinamento de força sobre a flexibilidade**. Fitness & Performance Journal**, Rio de Janeiro. v. 1, n. 2, p.29-39, 2002.

DEYO, R. Low-back pain. Sci Am, n.279, p.48-53, 1998.

GRANDJEAN, E.; HÜNTING, N. **Ergonomics of posture: review of various problems of standing and sitting**. Applied ergonomics. v.8, n. 3, p. 135-140, 1997.

GURGUEIRA, G.P.; ALEXANDRE, N.M.C.; CORREA FILHO, H.R**. Prevalência de sintomas músculo-esqueléticos em trabalhadores de enfermagem**. Rev. Latino Americana Enf**.,** Ribeirão Preto (SP), v.11, n.5,. p. set./out., 2003.

Instituto Nacional do Seguro Social. **Boletim Estatístico de Acidentes do Trabalho**: 1997. Brasília.

JOSEPHSON, M.; LAGERSTROM, M.; HAGBERG, M.; HJELM, E. W. **Musculoskeletal symptoms and job strain among nursing personnel:** a study over a three year period. Occup Environ Med 1997; 54:681-5.

KNOPLICH, J. **A coluna vertebral da criança e do adolescente**. São Paulo, 1983.

MOONEY, V. Avaliação e Tratamento da Dor Lombar. **Revista Clinical Symposia**, 2000.

VITTA, A. **Bem-estar físico e saúde percebida: um estudo comparativo entre homens e mulheres adultos e idosos, sedentários e ativos.** (Tese de Doutorado). Universidade Estadual de Campinas, Faculdade de Educação. Campinas, 2001.

OLINTO, C. P.; OLIVEIRA M. P.; ZUARDI, M. H. M; BARROS, N. **Grupos Educativos no Manejo de Pacientes Com Dor Crônica**. *Prática hospitalar* 2005; 41.

PESSINI, L. **Humanização da dor e sofrimento humanos no contexto hospitalar**. *Bioética* 2002; 10(2):51-72.

REBELATTO, J. R.; MORELLI, J. G. S. **Fisioterapia geriátrica a prática da assistência ao idoso**. São Paulo. Manole, 2004, p. 98-108.

ROCHA, A. M. **Fatores ergonômicos e traumáticos envolvidos na ocorrência de dor nas costas em trabalhadores de enfermagem**. Tese de Mestrado apresentada à Escola de Enfermagem da UFMG (Belo Horizonte), 151 p., 1997.

SATO, L. **As implicações do conhecimento prático para a vigilância em saúde do trabalhador**. Cadernos de Saúde Pública, 12(4), 489-495, 1996.

SILVA, MC; FASSA, AG; VALLE, NC. **Dor lombar crônica em uma população adulta do Sul do Brasil: prevalência e fatores associados**. Cad. Saúde Pública; Rio de Janeiro, v.20, n.2, mar/abr; 2004. Disponível em: http://www.scielo.br/scielo. Acesso em 01/10/2008.

SILVA, V. E. F.; MASSAROLLO, M. C. K. B. **A qualidade de vida e saúde do trabalhador de enfermagem**. Mundo Saúde 1998; 22(5): 283-6

SMEDLEY, J; INSKIP, H.; COOPER, C; COOGON, D.**Natural history of low back pain: a longitudinal study in nurses**. Spine 1998; 23(22):2422-6.

LESõES MUSCULOESQUELETICAS DECORRENTES DO TRABALHO EM FUNCIONáRIOS DE UM HOSPITAL PúBLICO

ABSTRACT

This study aimed to identify muscle-skeletal pain related to work in a hospital environment, characterizing the regions most affected body and present risk factors for D.OR.T. The subjects understood 28 workers who were part of the sectors of nursing (post female, post male , Isolation, UTI general, pediatrics, maternity and first aid), catering, maintenance, laundry, cleaning and stretcher-bearer . We used a questionnaire containing questions related to musculoskeletal complaints. 95% of participants reported feeling some kind of musculoskeletal symptoms, the prevalence of such symptoms in anatomical areas were: lumbar region (44%),

MMII (22%), MMSS (17%), thoracic region (12%). There was also, at that moment felt more ache (63% after the finish of work), posture to perform painful activity (53% of trunk flexion) and there were physical activity (64% reported not practice any type of physical activity). The results show that this poll is the high incidence of muscle-skeletal symptoms in multiple body regions, where the largest was ache in the lumbar region. There were also ergonomic factors related with back injuries, such as inadequate equipment, insufficient people to achieve changes in the supine position and transfers, inadequate stretchers, and others. Finally the importance of gym work associated with ergonomics that will contribute to improving the quality of life, creating spaces that break the pace and monotony of work seeking efficiency and health. Therefore, it is imperative the practice of preventive measures, such as the adequacy of furniture, physical activity and gym work.

Keywords: back pain, ergonomics, the hospital environment.

LES BLESSURES MUSCULO-SQUELETTIQUES EN RAISON DE TRAVAUX DANS LES AGENTS PUBLICS D'UN HôPITAL

RÉSUMÉ

Ce travail a eu comme objectif d' identifier des douleurs musculo-squelettiques relationnées au travail dans une ambiance hospitalière, caractériser les régions corporelles au travail dans une ambiance hospitalière, caractériser lês régions corporelles lês plus atteintes et présenter les facteurs de risque pour le D.O.R.T.. Les sujets se composaient de 28 travailleurs qui faisaient parti des secteurs d' infirmerie (féminin et masculin, isolement, UTI néonatal, UTI générale, pédiatrie, maternité, urgence), cuisine, manutention, buanderie, nettoyage et brancardiers. On a utilisé um questionnaire contenant des questions relationnées à des douleurs músculo-squelettiques. Parmi ces participants 95% ont declare sentir quelque type de symptône ostéo-musculaire, les prévalences de ces symptômes dans les zones anatomiques ont été: région lombaire (44%), MMII (22%), MMSS (17%), région thoracique (12%).

On a vérifié aussi à quel moment ils ont senti plus de douleurs (63% après avoir fini lê travail) attitude pendant l' activité douloureuse (53% flexion du tronc) et s' ils pratiquaient une activité physique (64% ont signalé ne pratiquer aucune activité physique). Les résultats obtenus dans cette enquête ont démontré que la fréquence des symptômes músculo-squelettique dans diverses régions corporelles est éleveé, la plus grande fréquence de douleur était dans la région lombaire. Se sont vérifiés aussi des facteurs ergonomiques relationnés avec les lésions dorsales telles comme équipements inadéquants, personnel insuffisant pour réaliser les changements de decubitus et transferts, civières inadéquates, entre autres.

Enfin, l' importance de la gymnastique du travail associée à l' ergonomie qui contribue à améliorer la qualité de vie, créant des espaces qui rompent le rythme et la monotonie du travail, en cherchant l' efficience et al santé.

En conséquence la pratique de mesures de prévention est impérative, comme l' adéquation du mobilier, l' activité physique et la gymnastique de travail.

Descripteurs: douleur lombaire, ergonomie, ambiance hospitalière.

LAS LESIONES MUSCULOESQUELéTICAS DEBIDO A LOS TRABAJOS EN LOS FUNCIONARIOS PúBLICOS DE UN HOSPITAL

RESUMEN

Este estudio tuvo como objetivo identificar dolor músculo-esqueléticos relacionados con el trabajo en un medio hospitalario, que caracterizan a las regiones más afectadas el cuerpo y el presente de los factores de riesgo para DORT.. El sujeto entendido 28 trabajadores que formaban parte de los sectores de enfermería (post femenino, post hombres , el aislamiento, la UTI neonatal, UTI general, pediatría, maternidad y lista para el socorro), la cocina, mantenimiento, lavandería, limpieza y maqueiros. Se utilizó un cuestionario con preguntas relacionadas con quejas musculoesqueléticas. De los participantes 95% informaron de sensación de algún tipo de síntomas musculoesqueléticos, la prevalencia de estos síntomas en zonas anatómicas fueron: región lumbar (44%), MMII (22%), MMSS (17%), región torácica (12%). No se también, en ese momento se sentía más el dolor (63% después de la meta de trabajo), la postura dolorosa para llevar a cabo la actividad (53% de flexión de tronco) y se mantuvo actividad física (64% informaron que no la práctica de cualquier tipo de actividad física). Los resultados muestran que esta encuesta es la alta incidencia de los trastornos musculoesqueléticos síntomas en múltiples regiones del cuerpo, donde el más grande fue el dolor en la región lumbar. Encontrado también factores ergonómicos relacionados con las lesiones de la espalda, como la insuficiencia de equipo, las personas pobres para lograr los cambios en la posición supina y las transferencias, la falta de camillas, y otros. Por último, la importancia de gimnasio trabajos relacionados con la ergonomía que contribuyan a mejorar la calidad de vida, creando espacios que rompen el ritmo y la monotonía de los trabajos que buscan la eficiencia y la salud. Por lo tanto, es imprescindible la práctica de las medidas preventivas, tales como la adecuación de mobiliario, la actividad física y el gimnasio de trabajo. Palabras llave: dolor de espalda, ergonomía, el entorno hospitalario.

LESõES MUSCULOESQUELETICAS DECORRENTES DO TRABALHO EM FUNCIONáRIOS DE UM HOSPITAL PúBLICO

RESUMO

Este trabalho teve por objetivo identificar dores músculo-esquelético relacionadas ao trabalho em um ambiente hospitalar, caracterizar as regiões corporais mais acometidas e apresentar os fatores de risco para D.O.R.T.Os sujeitos compreenderam 28 trabalhadores que faziam parte dos setores de enfermagem (posto feminino, posto masculino, isolamento, UTI neonatal, UTI geral, pediatria, maternidade e pronto de socorro), cozinha, manutenção, lavanderia, limpeza e maqueiros. Utilizou-se um questionário contendo perguntas relacionadas a queixas musculoesqueléticas. Dos participantes 95% referiram sentir algum tipo de sintoma osteomuscular, as prevalências desses sintomas nas áreas anatômicas foram: região lombar (44%), MMII (22%), MMSS (17%), região torácica (12%). Verificou-se também; em que momento sentiam mais dor (63% após o termino do trabalho), postura ao realizar atividade dolorosa (53% flexão de tronco) e se realizavam atividade física (64% relatou não praticar nenhum tipo de atividade física). Os resultados obtidos nesta pesquisa demonstram que é elevada a ocorrência de sintomas músculo-esquelético em várias regiões corporais, onde o maior relato de dor foi em região lombar. Verificaram-se também fatores ergonômicos relacionados com as lesões dorsais, tais como equipamentos inadequados, pessoas insuficiente para realizar as mudanças de decúbitos e transferências, macas inadequadas, entre outros. Por fim a importância da ginástica laboral associada à ergonomia que contribui para á melhoria da qualidade de vida, criando espaços que quebram o ritmo e a monotonia do trabalho buscando eficiência e saúde. Por isso, torna-se imperiosa a pratica de medidas de prevenção, como a adequação do mobiliário, atividade física e a ginástica laboral.

Descritores: dor lombar; ergonomia; ambiente hospitalar.