75 - AURICULAR ACUPUNCTURE TO THE REDUCTION OF BODY MASS INDEX: A RETROSPECT REPORT OF CASES

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INTRODUCTION:

Obesity as a risk factor is the main disturb in the developed world, and also in the sub developed, as Brazil, due to the inadequate alimentation and the spread of the personal computer the free time of the individuals was influenced negatively, leading to an inactive lifestyle and the increasing of sedentary lifestyle.

The Ministry of Healthy has recently disclosed that 48,1% of Brazilian population is overweight and 15% is obese. Five years ago, the proportion was 42,7% to the weight excess and 11,4% to obesity; those data are from de research Vigilância de Fatores de Risco e Proteção para Doenças Crônicas por Inquérito Telefônico (VIGITEL, 2010). .

The severe obesity is associated to the increasing of 12 times in the mortality between 25 to 35 years when compared to slim individuals. Obesity can lead to the discrimination in many fields of life, including health and jobs (BRONW, 2011).

The descriptions of the obesity phenomena, as the identification of specific group risks, propitiate important tools to the promotion of health considering the heterogeneities of the social spaces. Thus, the possible relation between obesity and many work processes compose the object of study, not really explored among Brazilian workers (BOCLIN, 2010).

Associated to the obesity costs with absenteeism were estimated in approximately US$ 4.3 billion/year in the US, the biggest medical costs and the absenteeism taxes were associated with the highest BMI values, and that the obese workers present the highest lose of productivity hours (absenteeism and presenteeism) than overweight or normal weight (GOETZEL et al, 2010).

This is the challenge in the field of Workers Healthy what points out the need of new strategies, making healthy promotion measures fundamental, focusing the worker's lifestyle (POHL et al, 2010).

The professionals must seek the prevention in primary levels, avoiding that the obesity installs, in secondary levels, to fight its aggravation, trying to come back to the previous state, and in tertiary levels, in the alleviation and control of symptoms, giving rise routine adaptations that improve individual's life quality (HADDAD, 2009).

The BMI constitutes, nowadays, the most used tool to the quantitative diagnose of obesity, due to its simplicity e good correlation with the corporal adiposity (NEVES, 2003). This index is expressed as the ratio between body mass in kilos and the height of the individual in meters: IMC = mass (kg)/ height² (m).

It is important to highlight the importance of alternative treatments for obesity. It is estimated that 4 (four) million Brazilians cast up some form of alternative therapy to treat diseases and growing at around 20% per year worldwide (PINHEIRO, 2012).

The acupuncture is the group of theoretical empirical knowledge from Chinese Traditional Medicine, which aims the treatment and cure of diseases through the application of nails and moxas, besides other techniques. This science arises in Chine during Stone Ages, approximately 4.500 years ago (WEN, 2006).

The auricular acupuncture or auriculotherapy is one of the techniques of acupuncture, which uses the auricular pavilion to accomplish healthy treatment, taking advantage of the reflex that the auricle makes on the nervous system, being very useful to the treatment of compulsive eating and obesity (SOUZA, 2007).

Reickmann (2002) suggests that, to the obesity treatment, points from the digestive system must be sedated, such as the month, stomach, spleen/pancreas, gallbladder, among others, and the correct choice of point to the treatment of obesity promotes the increasing of the metabolism, improve the digestive and intestinal functions and the positive effects over the emotional factors involved as well, helping in the control of eating compulsion in a healthy way.

METODOLOGY

The study was of a quantitative nature, with a database collection and retrospective profile. The information was collected from the cards of the employees seen in the occupational healthy department of a metallurgical workshop, from August to October 2011. It was approved in the ethics committee of the Faculdade de Tecnologia – IBRATE, under the number 129.417.

The sample was 10 cards of workers from both genders from 20 to 50 years old. The criteria to the inclusion in this program took into consideration the results of the Body Mass Index obtained after physical evaluation done by the company, which must be over 25 (BMI ≥ 25). As an exclusion criteria the use of weight loss pills, carrier of hyperthyroidism, hypothyroidism, pregnancy, diabetes or any other hormonal disorder, under diets or practicing regular physical activities.

The auricular acupuncture sections where done from August to October 2011.

The cards were the anamneses approaching questions as food routine data, the number of meal a day, liquids ingestion, sweets and fritter, the quantity of fruit and vegetables eaten a day, carbohydrates ingestion, proteins, cholesterol level, glycemic and heart pressure. The measures of body weight were taken to watch the evolution of treatment, and although the target was not the measure of the research, the girth was measured in the beginning, middle and end of the treatment. The girth was taken with the worker standing, after expiration, in a medium point between the last costal arch and the iliac crest anterosuperior, with an inelastic ribbon, in horizontal position.

The material uses to the auricular acupuncture section were semi permanent nails of 1,5 mm (sterilized and disposable), tweezers to manipulate the nails, alcohol 70% to the ear asepsis, micropore to the fixation of the nails, mustard seeds and cotton.

The points used to the sections were: Shen Men, Kidney, Sympathetic Nervous System (SNS), Hungry (bilateral), Addiction and Stomach; Complementary points: Anxiety 1 and 2, pancreas (in case of sweets voracity), Large Intestine (in case of constipation) and Gallbladder (in case of felling too filled after meals). The localizations were adopted according to Souza (2007).

It is necessary to report that two volunteers were treated with mustard seeds by the presentation of discomfort and pain with the nails.

RESULTS

To a better visualization and comprehension of this study, the results are presented in tables that represent the

variation between moments before and after the treatment

Table 1- Weight of the volunteers before and after the treatment

Volunteers	Inicial weight	Final weight	Diference (kg)	Variation (%)
1	96,1	95,40	- 0,70	0,73
2	118,5	117,0	- 1,50	1,0
3	100,6	100,0	- 0,60	0,60
4	92,40	90,0	- 2,40	2,60
5	81,10	80,0	- 1,10	1,36
6	82,80	83,20	+ 0,40	0,48
7	86,80	88,80	+ 2,00	2,33
8	87,90	87,0	- 0,90	1,02
9	73,10	74,0	+ 0,90	1,23
10	72,30	71,40	- 0,90	1,24
Average		Individual average loss	= - 1,16 kg	
		Average variation of the group	= - 1,26%	

Table 2- BMI of the volunteers before and after the treatment

Volunteer	Inicial BMI	Final BMI	Diference (kg)	Variation (%)
1	31,02	30,80	0,22	0,70
2	35,38	34,94	0,44	1,0
3	32,85	32,65	0,20	0,61
4	30,52	29,73	0,79	2,59
5	25,31	24,97	0,34	1,34
6	28,99	29,13	+ 0,14	0,48
7	30,03	30,73	+ 0,70	2,33
8	30,78	30,46	0,32	1,04
9	25,90	26,22	+ 0,32	1,24
10	28,60	28,24	0,36	1,26
Average		Individual average loss		
		Average group variation	= - 1,25%	

According to the results on tables 1 and 2, it is possible to notice that 7 among the 10 volunteers treated lost weight and consequently had a decrease in the BMI, and three of them gained weight, the ones who were treated with the mustard seeds. In relation to the weight, it is possible to notice that the volunteers, individually, lost an average - 1,16 Kg with a group variation of - 1,26% and about the BMI there were a average reduction of - 0,38kg/m2 per individual and a group variation of - 1,25%.

Obesity, to the Traditional Chinese Medicine is linked to a disharmony of the Earth element, generating an accumulation of humidity, damaging the transformation and transport functions of the organic liquids – JING YE – under responsibility of the spleen, in the energetic view. The food that exceed the limit of satiation overtake both the digestion capacity of the spleen and stomach as the capacity of absorption and transportation, leading to an food obstruction which promotes a unbalance manifesting by symptoms such as abdominal plenitude, distention, with belching putrid or acidic, indigestion, vomiting, and diarrhea FERRARI, 2007).

The ear is innervated by many nerves, including the vagus, trigeminal facial, and ramus (the second and third) from the cervical nerves. The vagus interacts with the cranial nerves and the ones from the digestion system, and those nerves share the way to the brain. The hypothesis is that the stimuli of the auricular nerves interfere in some signs of appetite from the gastrointestinal treat (LACEY et al, 2003).

Table 3 – Girth of the volunteers before and after the treatment

Volunteer	Inicial Girth (cm)	Final Girth (cm)	Diference (cm)	Variation (%)
1	96	94	-2,0	0,70
2	121	119	-2,0	1,0
3	107	106,5	-0,5	0,61
4	97	94	-3,0	2,59
5	92	90	-2,0	1,34
6	95	95	0,0	0,48
7	96	96,5	+0,5	2,33
8	96,5	95	-1,5	1,04
9	84	85	+1,0	1,24
10	87	85	-2,0	1,26
Average		Individual average loss	= - 1,86 cm	
		Average group variation	= - 1,90%	

In relation to the girth it is possible to notice, by the table 3, an average reduction by individual of - 1,86 cm, and a average variation of the group of - 1,90. It is important to highlight that the overweight associated with the excess of fat in the mesentery region, the central kind of obesity, visceral or androgenic, is associated to a bigger risk of atherosclerotic diseases. According to the Brazilian Association of Cardiology, the ideal values to a good health are of a girth ≤ 94 for men and ≤ 80 for women, values over those are considerate as a health risk (SOCIEDADE BRASILEIRADE CARDIOLOGIA, 2007).

DISCUSSION

Obesity is associated to an unbalance between the caloric intake and the energy expenditure, in other words, when the caloric intake is higher than the energy expenditure, by the end of a period, overweight and obesity is developed. The consumed energy is stored, generating an accumulation of adipose tissue.

Studies done in Germany found that, when the overweight is more than 10% the life expectation of the individual is reduced in 18% and when this excess overtakes 30% the life expectation is reduced in 50% (GALINDO e CASADO, 2005).

With the results presented in this paper one can observe that there were a reduction in the BMI in seven from the ten volunteers treated with auricular acupuncture, this results corroborate with Trevizolli's (2009) studies of auricular acupuncture and obesity.

In Trevizolli (2009) work, there was a gradual decrease in body weight of all voluntary higher than the present study. It is believed that the weight lost was bigger due to the change in the lifestyle of the volunteers, which didn't happened in the present study.

Haddad (2009) performed a study with auricular acupuncture and electro acupuncture by eight weeks. The study

aimed the control of anxiety and appetite of in obese workers in the university hospital, the result did not show weight reduction nor body mass index from the subjects, however, a significant reduction in the ratio waist – hip was presented. Although the quantitative results were not satisfactory in weight loss and BMI, there was a reduction in the appetite behavior in relation to satiation, plenitude, desire of sweets and palatable food.

Ferrari (2007), in his study Obesidade: tratamento com acupuntura auricular, fitoterapia – a research done with women at an average age of 35 years old, also demonstrated a decreasing of the body weight of the volunteers, however, this treatment was incremented with the use of phytotherapy.

In the studies above Haddad (2009) e Trevizzoli (2009), the sweet consumption was very relevant, but in the present study the sweet consumption was reported by only two volunteers that claimed a decrease of this consumption after the sessions.

Galindo e Casado (2005), is his study about Acupuncture and obesity treatment in which he treated 15 volunteers with the use of auricular acupuncture, the results demonstrate the efficacy of the method in 93,33% of the volunteers.

Pelaquin (2011) is his study Obesidade: Estudo de Caso com uma voluntária com idade de 34 anos com IMC igual a 35,6Kg/m², has done the treatment with systemic acupuncture and auriculotherapy . The result obtained with this study was a lost of 0,9 Kg from the body weight and a decrease of BMI in 0,4 kg/m2, reduction of relative fat in 1,3% and absolute fat in 1,5%, although the ratio between waist and hip kept the same, what, according to the author, demonstrate the efficiency of acupuncture in the treatment of obesity.

FINAL CONSIDERATION

Nowadays there were many studies about the risk that overweight and the excess of weight represents to health, such as, the development of dyslipidemias, cholesterol, hypertension, diabetes, the so called metabolic syndrome so harmful to health, specially when associated to obesity in the abdominal region.

The obese use to have a incontrollable anxiety, which leads to compulsive eating. This person knows that one must not exaggerate in the caloric ingestion, but cannot put it into practice.

With the auricular acupuncture is possible to work on points of compulsive feed, anxiety and metabolic functional improvements. When talking about the effects produced by the auricular acupuncture, one can look to this technique as a complementary therapy, which helps a lot in a weight loss program, when a oriented diet and exercises are very welcome.

There are, nowadays, numerous treatments to obesity, such as bariatric surgery, used only in cases of morbid obesity, although a remedy that can result in other risks to health, reducing appetite medicine and also miracle diets that bring more risks than benefits to health.

In this context, the treatment with acupuncture, that aims a total balance of the body without offering risks to the health, seems to be a welcome and complementary way.

In the present study it was possible to observe a discrete reduction of the Body Mass Index in seven of the ten individuals treated with auricular acupuncture, it is worth to highlight that the best way to keep an adequate weight is with a healthy lifestyle, balance diet rich in fibers, ingestion of liquids and an important and indispensable in this maintenance of the ideal weight is the practice of physical exercises.

Besides that, the majority of the studies about the theme is done with women, showing, this way, the need of researches involving weight loss in both genre, and also researches allying the effects of acupuncture in different BMI values and obesity treatment in different age groups.

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AURICULAR ACUPUNCTURE TO THE REDUCTION OF BODY MASS INDEX: A RETROSPECT REPORT OF CASES.

ABSTRACT

Objective: To analyze the therapeutics results of the appointment records of the workers of a metallurgical plant in São José dos Pinhais – PR, that applied auricular acupuncture treatment to reduce the body mass index (BMI). Methodology: this study was quantitative, with data from a database, with a retrospective profile. The database was the appointment records from the occupational healthy sector of the company, with workers from different job possitions. The sample was composed by 10 records of volunteers of different gender, between 20 and 50 years old, and through the results of the physical assessment done in the plant had a BMI ≥ 25. Results:The analysis of the results indicates an average reduction of the group from -1,25kg/m2 and -1,90 cm in the Body Mass Index and Abdominal Circumference, respectively. Conclusion: the study indicates that the use of auricular acupuncture in the treatment of obesity was positive, but discrete, in the reduction of the body mass index, and also was a stimulus to the adoption of a healthy lifestyle to the workers.

KEY WORDS: Auricular Acupuncture. Body mass index. Workers.

L'ACUPUNCTURE AURICULAIRE DANS LA RÉDUCTION DE L'INDICE DE POIDS CORPORELLE: LES DÉCLARATIONS RÉTROSPECTIVES DE CAS

RÉSUMÉ

Objectif: Pour analyser les résultats thérapeutiques des dossiers médicaux et les travailleurs de l'industrie métallurgique, situé à San José de pin-pr, qui a subi un traitement par acupuncture auriculaire pour la réduction de l'indice de masse corporelle (IMC). Méthodes: Cette étude a été nature quantitative, la collecte faite dans la base de données, consulté le profil retrospectivo.Foi dans la base de données, sous la forme de dossiers médicaux, travail entreprise saaude secteur où les employés ont été traités pour l'échantillon work.The différents messages composé de 10 dossiers médicaux des volontaires de sexe différent âgés de 20 à 50 ans et cela signifie que les résultats de l'examen physique effectué dans l'entreprise ont vu leur indice de masse corporelle IMC> _ 25. Résulter: Analyse des résultats a montré une réduction groupe moyen de -1,25 kg / m -1,90 cm de l'indice de masse corporelle et le tour de taille, respectivement. Conclusion: Cette étude a montré que l'utilisation de l'acupuncture auriculaire dans le traitement de l'obésité a été positive, mais discret, la réduction de l'indice de masse corporelle, ainsi que servi inciter les travailleurs à adopter un mode de vie sain.

MOTS-CLÉS: Acupuncture . Auriculaire. Indice de Masse Corporelle. Les travailleurs.

ACUPUNTURA AURICULAR EN LA REDUCCIÓN DE LA MASA CORPORAL DECLARÓ: INFORMES RETROSPECTIVOS DE CASOS.

RESUMEN

Objetivo: Analizar los resultados terapéuticos de los trabajadores de las fichas de una industria metalúrgica, ubicada en san jose de pino-pr, que se sometieron a tratamiento con acupuntura auricular para la reducción en el índice de masa corporal (IMC). Métodos: El estudio fue de carácter cuantitativo, la colección realizada en la base de datos, con perfil retrospectivo.Foi consultar una base de datos en forma de registros médicos, el sector de la salud ocupacional de la empresa, donde se reunió con funcionarios de diferentes muestra mensajes work.The estaba compuesto por 10 registros médicos voluntarios de diferentes sexos con edades entre 20 y 50 años tuvieron su índice de masa corporal IMC 25. Resultados: El análisis de los resultados indicó una reducción del grupo promedio de -1,25 kg / m y -1,90 cm en el índice de masa corporal y la circunferencia de la cintura, respectivamente. Conclusión: El estudio demostró que el uso de la acupuntura auricular en el tratamiento de la obesidad fue positiva, pero discreto, la reducción en el índice de masa corporal, así como sirvió de estímulo para los trabajadores aso adoçaode un estilo de vida más saludable.

PALABRAS CLAVE: Acupuntura Auricular. Índice de Masa Corporal. Trabajadores

ACUPUNTURA AURICULAR NA REDUÇÃO DO ÍNDICE DE MASSA CORPORAL: RELATOS RETROSPECTIVOS DE CASOS

RESUMO

Objetivo: analisar os resultados terapêuticos das fichas de atendimentos a trabalhadores de uma indústria metalúrgica, situada em São José dos Pinhais – PR, que realizaram tratamento com acupuntura auricular para redução no Índice de Massa Corporal (IMC). Métodos: o presente estudo foi de natureza quantitativa, de coleta feita em banco de dados, com perfil retrospectivo. Foi consultado um banco de dados, na forma de fichas de atendimento, do setor de saúde ocupacional da empresa, onde foram atendidos funcionários de diferentes postos de trabalho. A amostra foi composta por 10 fichas de atendimento de voluntários de diferentes sexos com idade variando de 20 a 50 anos e que através do resultado da avaliação física realizada na empresa tiveram seu índice de massa corporal IMC≥ 25. Resultados: As análises dos resultados indicaram uma redução média do grupo de - 1,25kg/m² e - 1,90cm, no Índice de Massa Corporal e Circunferência abdominal, respectivamente. Conclusão: O estudo apontou que o uso da acupuntura auricular no tratamento da obesidade foi positivo, porém discreto, na redução do índice de massa corporal, bem como serviu de estímulo aos trabalhadores para adoção de um estilo de vida mais saudável.

PALAVRAS CHAVE: Acupuntura Auricular. Índice de massa corporal. Trabalhadores.