# 75 - PREVALENCE AND RISK FACTORS OF VARICOSE VEINS OF LOWER LIMBS AMONG THE EMPLOYEES OF CLEANING OF A PRIVATE INSTITUTION, CITY OF CASCAVEL – PR

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## INTRODUCTION

Varicose veins are characterized by Pitta (2000), as tortuosity, stretching and increase of diameter of the veins of the lower limbs. It is considered a chronic disease, which begins as an aesthetic problem and becomes a functional problem in the lower limb.

According to Neves (2006), from puberty there is a progressive increase in the incidence of varicose veins, considering that about 70% of people over 70 have venous dilatation of lower limbs. It is estimated that 24 million people suffer from problems caused by varicose veins, in the United States nowadays.

Neves (2006), further states that varicose veins are a hereditary disease in which the individual is born with a genetic propensity for less resistance of the vein wall and this predisposition, associated with triggering factors such as pregnancy, obesity, sedentary lifestyle and occupations involving prolonged time upright (barbers, clerks, porters) or that require great efforts (dock workers, lifters), contribute for the appearance of varicose veins.

The venous disease is an important public health problem. It affects people of different ages, may cause serious socioeconomic problems, such as inability to work, as it has an indirect impact on the quality of production and consequent loss of operational efficiency. It is responsible for absenteeism and hospitalizations and even retirement of individuals in productive phase of life (FRANCE; TAVARES, 2003; LIGHT, 2006).

According to Melo (1999), the most frequent complaint of patients with varicose veins is pain. It is associated with tiredness, weight sensation and increased ambient temperature reported in the second half of the day, after a long period in standing. The symptoms are relieved with ambulation and horizontal position of the members. The complaint of itching is also common, leading the patient to scratch them repeatedly causing the emergence of eczematous skin lesions and abrasions.

For Renner (2002), the role of posture while working on the increase of varices is still a very controversial issue, but for Silva (1999) peripheral venous circulation is profoundly affected by posture. According to Monteiro Bertagni cited by Light (2006), although there is no evidence of direct cause-effect relationship with the work of venous disease, there is current consensus in medical opinion that the work can seriously aggravate its development.

Considering the local situation, the aim of this study was to determine the prevalence and risk factors of varicose veins in the cleaning employees of a private institution in the city of Cascavel-Pr.

## METHODS

For this epidemiological study, with quantitative research field and cross-sectional, 60 women between 18 and 60 years were interviewed employees of cleaning in a private institution of higher education, Assis Gurgacz University- FAG in the city of Cascavel-Pr. To obtain the information, a questionnaire was written by the researchers. It was composed of 22 questions about associated factors and types of varicose veins of lower limbs and also possible aesthetic dissatisfaction.

The questionnaire was applied in June 2014, during the time when the employees were available. To be addressed by the authors, the employees were explained what was the study about, required them to answer all questions. It was explained the relevance of the study for the benefit of researched ones, the importance of trustful answers in the questionnaire and that only the authors would take knowledge of them.

All volunteers who completed the questionnaire correctly and signed the consent form took part of the study. Exclusion criteria for this study were the employees who refused to participate, as well as those ones who were absent from work.

For statistical analysis, data were tabulated in Microsoft Office Excel 2007 and analyzed using SPSS 15.0 software.

## RESULTS AND DISCUSSION

The sample consisted of 60 female volunteers, in which 13 (21.7%) were aged 20 to 30, 19 (31.7%) between 31 and 40, 23 (38.3%) between 41 and 50, 5 (8.3%) between 51 and 60. The age group that was most affected of varicose veins was 51 to 60 (100%), however in other age groups there was also a high prevalence: 41 to 50 years, incidence of 96% , 31 to 40 years incidence of 89%, from 21 to 30 years of 77% (Table 1). It was found that with increasing age, the incidence of varicose veins also increases.

TABLE 1 Distribution of percentages concerning to risk factors (age, BMI, physical activity, family history, race and medicine) versus presence of varicose veins in cleaning employees of a private institution in the city of Cascavel- Pr.

| | PRESENCE OF VARICES IN LOWER LIMBS | |
|---|---|---|
| **Risk factors** | **Absolute frequency** | **Relative frequency** |
| **Age** | | |
| 20-30 years | 10 | 77% |
| 31-40 years | 16 | 89% |
| 41-50 years | 23 | 96% |
| 51-60 years | 5 | 100% |
| **BMI** | | |
| Underweight | 1 | 100% |
| Normal weight | 21 | 84% |
| Overweight | 20 | 91% |
| Obesity class I | 4 | 100% |
| Obesity class II | 5 | 100% |
| Obesity class III | 3 | 100% |
| **Physical activity** | | |
| Perform physical activity | 6 | 75% |
| Sedentary | 48 | 92% |
| **Family History** | | |
| cases in the family | 22 | 92% |
| Have no cases in the family | 32 | 89% |
| **Race** | | |
| White | 26 | 97% |
| Parda | 23 | 92% |
| Black | 5 | 63% |
| **Medicine** | | |
| Ingest medicine | 29 | 91% |
| Do not ingest medication | 25 | 89% |

Consistent with Azizi (2001) and Silva (2002), the prevalence of varicose veins is higher from the third decade of life. Chiesa (2005), in a study with 53% of the population over 50 years old also revealed some reverse venous flow. Also Maffei et al. (1986) observed increased prevalence of varicose veins with age, reaching 78.2% of women over 70 years. In our study, it was found that 1 (1.7%) of women have a body mass index below normal weight, 24 (40%) had a normal weight, 23 (38.3%) overweight, 4 (6.7%) are obese class I, 5 (8.3%) were obese class II, 3 (5.0%) are obese class III (Classification according to World Health Organization). Classification according to BMI, indicates that higher incidence of varicose veins, lies on underweight women, obese class I, II and III, but women with normal weight and overweight also have high prevalence of varicose veins (Table 1). It was found that the BMI factor does not alter the presence of varicose veins in the studied sample.

To Mello (1999), obesity is an aggravating factor for the appearance of varicose veins. There is a high incidence of varicose veins in obese patients, caused by increased intra abdominal pressure, sedentary lifestyle, which determines postural venous stasis; Furthermore, the texture of fat tissue in obese people cause distention of the venous wall, in cases where there is an increase in pressure inside the vein. It is noteworthy, however, that not all obese patients have varicose veins, suggesting that actually varicose veins only can be developed in situations where there is a weakness of the vein walls.

In our study, physical inactivity is present in most of the employees, 52 (86.7%), and they have high prevalence of varicose vein 48 (92%), but the employees who perform physical activity 8 (13.3%) also have a high number of varicose vein 6 (75%) (Table 1).

This was demonstrated by Alberti et al. (2010), when evaluating 100 adult patients of both genders reported no increased prevalence of varicose veins in sedentary people, which however, had the most severe forms of chronic venous disease.

According to the employees, 36 (60%) have varicose veins in the lower limbs in their families, while 24 (40%) claim to have no cases in the family. Genetics do not interfere in the appearance of varicose veins, as 22 (92%) of women stated that they have varicose veins and as in their families, while 32 (89%) have varicose veins in the lower limbs and claim that the same fact happens in the family (Table 1).

In contrast, the study of Thenard-Cornu et al. (1994), analyzing men and women between 30 and 40 and their parents through physical examination, reported that the risk of developing varicose veins was 90% when both parents presented varices, decreasing to 25% for males and 62% for females when only one parent was affected. For patients whose parents do not have varices, the risk of developing this disease reached 20%.

Of those interviewed, 27 (45%), stated to be white race, 8 (13.3%) black, while 25 (41.7%) brown. It was found that race is a risk factor, considering that 26 (97%) of women considered Caucasians have varicose veins, 23 (92%) mulatto women, while only 5 (63 %) of black women reported having varicose veins (Table 1).

In accordance with Maffei et al (1986), which affirms the ethnic factor in the development of varicose veins, it is most common in whites than in blacks or mulattos.

Concerning to medication, 28 (46.7%) women reported taking some medication, while 32 (53.3%) did not take any medication. It was found that drugs, especially contraceptives, does not influence the presence of varicose veins considering that 29 (91%) of women ingest medications, and have varicose veins in the lower limbs, while 25 (89%) women do not ingest medicine and also have varicose veins in the lower limbs (Table 1).

In agreement with Silva and Santos (2006), which include the use of oral contraceptives as low evidence factor in appearance and worsening of varicose veins of lower limbs. In contradiction with the previous author and the present study, Figueiredo (2004), highlights the estrogen hormone therapy among the main triggers of appearance and progression of varicose veins of lower limbs.

In the sequence of the present result, it was found the prevalence of varicose veins, 54 (90%) of the interviewed women, among them, 40 (66.7%) have telangiectasia, 14 (23.3%) more caliber varices from those 6 (10%) reported not having varicose veins.

For Callam (1994), about half the world's population have varicose veins, reaching 50 to 55% of women, when considering the smaller forms of varicose disease (telangiectasia and reticular varices). Considering the caliber varicose forming projection (prominence) on the skin, the disease reaches less than 1/4 of population, reaching 20 to 25% of women.

As for the pain factor and edema in the lower limbs of the survey voluntaries, from the 54 (90%) women who have varicose veins in the lower limbs, 19 (35.2%) reported no pain and 35 (64.8%) present pain, 17 (31.5%) during work hours, 12 (22.2%) during rest hours, 6 (11.1%) during both, 19 (35.2%) have edema, 35 (64.8% style) do not.

TABLE 2 - Distribution of percentages concerning to the pain and swelling of the lower limbs versus presence of varicose veins in cleaning employees of a private institution in the city of Cascavel- Pr.

| | PRESENCE OF THE LOWER LIMBS VARICES | |
|---|---|---|
| **Characteristics** | **ABSOLUTE FREQUENCY** | **RELATIVE FREQUENCY** |
| **Leg pain** | | |
| not present | 19 | 35,2% |
| present pain | 35 | 64,8% |
| **Time of pain** | | |
| During work hours | 17 | 31,5% |
| During rest hours | 12 | 22,2% |
| During work and rest | 6 | 11,1% |
| **Edema of the lower limbs** | | |
| present edema | 19 | 35,2% |
| not present | 35 | 64,8% |

According Bradbury et al. (1999), pain, heaviness and fatigue in the lower limbs is also part of the clinical picture, which are common symptoms, present in 39-65% of patients reported as being more a feeling of heavy and tired legs than as pain. They usually appear in the afternoon, after a period of activity in the standing position and are more frequent in women, showing improvement with rest and elevation of the extremity or walking.

Another relevant issue of the study is that 32 (59.3%) of women answered they are worried about the presence of varicose veins, 27 (50%) think that it influences the choice of clothing, 9 (16 7%) stated that the fact of having varicose veins bother them all the time, 22 (40.7%) state that it does not bother them most of the time, and 23 (42.6%) indicated that they feel indifferent to presence of varicose veins, and 22 (40.7%) of these women claim that having varicose veins produces negative feelings on them (shame, frustration, guilt, depression).

A multicenter study by Kurz et al. (2001) in developed countries showed that higher incidence of chronic venous disease form is found the presence of varicose veins associated with skin changes, varicose veins and edema and

telangiectasia, respectively.

Reflecting on the current health policies that seek to care for the individual as a whole, quality of life is an important aspect and it can explain rates that are closer to their actual health condition. In a systematic review Herber et al. (2007), the most advanced stage of venous disease had proven its impact on quality of life, considering a significant decrease in their rates due to chronic condition and damaging individuals of working age.

Although they are not just cosmetic problems order, but often with serious consequences for the integrity of the organism, several consulted authors highlighted that venous disease of the lower limbs have not received the deserved importance. One reason seems to be the fact that a very small percentage of patients seek medical treatment, and when they do, they are usually motivated by the most advanced stages of the disease (SILVA et al, 1992, p. 440).

**CONCLUSION**

The study revealed a high prevalence of varicose veins in the cleaning employees of the institution, predominantly telangiectasia type, in which it was found that with increasing age, increases the incidence of varicose veins.

It was noted that the Caucasians and brown have higher rates of varicose veins. Risk factors such as BMI, sedentary lifestyle, genetics and medication do not influence the presence of varicose veins in the studied sample.

Concerned to pain and edema of the lower extremities, it is present in most of the employees, so there is the same concern to the fact that they have varicose veins, which influences the choice of clothing and sets negative feelings, affecting their self-esteem.

We conclude then that varicose veins are an important problem in the context of public health. Therefore, there is a need of creating health programs aimed at prevention and diagnosis of this disease, as well as effective treatment of patients and guidance to population.

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**PREVALENCE AND RISK FACTORS OF VARICOSE VEINS OF LOWER LIMBS AMONG THE EMPLOYEES OF CLEANING OF A PRIVATE INSTITUTION, CITY OF CASCAVEL – PR**

**ABSTRACT**

Introduction: Varicose veins are characterized as tortuosity, stretching and increased diameter of the veins of lower limbs. The venous disease is an important public health problem. Objective: To determine the prevalence and risk factors of varicose veins in the cleaning employees of a private institution, in the city of Cascavel-Pr. Methods: 60 women between 18 and 60 years were interviewed; they are employees of cleaning in a private institution of higher education, Assis Gurgacz University - FAG in the city of Cascavel-Pr. A questionnaire was written by the researchers and applied in June 2014, during the time the employees were available. For statistical analysis, data were tabulated in Microsoft Office Excel 2007 and analyzed using SPSS 15.0 software. Results: 90% of women have varicose veins (from these, 66.7% have telangiectasia and 23.3% higher caliber varices) and 10% guaranteed not having varicose veins. It was found that increasing age increases the incidence of varicose veins, brown and white race have greater involvement, but risk factors such as BMI, sedentary lifestyle, genetics and medication do not influence directly the presence of varicose veins in this sample. Conclusion: The study revealed a high prevalence of varicose veins in cleaning employees of the institution and that there is a need to develop health programs for prevention, diagnosis and treatment of this disease.

**KEYWORDS:** prevalence, risk factors, varicose veins.

**PREVALENCE ET FACTEURS DE RISQUE DE VARICES DU BAS PARMI LES EMPLOYES DE NETTOYAGE D'UN ETABLISSEMENT PRIVE, LA VILLE DE CASCAVEL - PR**

**RÉSUMÉ**

Introduction: Les varices sont caractérisés comme tortuosité, d'étirement et de l'augmentation du diamètre des veines des membres inférieurs. La maladie veineuse est un problème majeur de santé publique. Objectif: déterminer la prévalence et les facteurs de risque de varices dans les employés de nettoyage d'une société privée, la ville de Cascavel-Pr.

Méthodes: 60 femmes ont été interrogées entre 18 et 60 ans, les employés de nettoyage d'un établissement privé d'enseignement supérieur, Faculté Assise Gurgacz - FAG dans la ville de Cascavel-Pr. Un questionnaire, rédigé par les chercheurs eux-mêmes, appliqué en Juin 2014, le temps que les employés étaient disponibles a été préparé. Pour l'analyse statistique, les données ont été compilées dans Microsoft Office Excel 2007 et analysées en utilisant le logiciel SPSS 15.0. Résultats: 90% des femmes ont des varices, de ceux-ci, 66,7% ont telangictasias, 23,3% de plus varices de gros calibre, et 10% garanti de ne pas avoir des varices. Il a été constaté que l'âge augmente l'incidence des varices, la brune et la race blanche a une plus grande participation, mais les facteurs de risque tels que l'IMC, la sédentarité, la génétique et les médicaments n'influence pas la présence de varices cet échantillon. Conclusion: L'étude a révélé une forte prévalence des varices chez les employés de nettoyage de l'institution et qu'il est nécessaire de développer des programmes de santé pour la prévention, le diagnostic et le traitement de cette maladie.

**MOTS CLÉS:** prévalence, facteurs de risque, les varices.

**PREVALENCIA Y FACTORES DE RIESGO DE VARICES DE BAJA ENTRE LOS EMPLEADOS DE LIMPIEZA DE UNA INSTITUCIÓN PRIVADA, LA CIUDAD DE CASCAVEL – PR**

**RESUMEN**

Introducción: Las venas varicosas se caracterizan como tortuosidad, estiramiento y aumentando el diámetro de las venas de las extremidades inferiores. La enfermedad venosa es un importante problema de salud pública. Objetivo: Determinar la prevalencia y factores de riesgo de las venas varicosas en los empleados de limpieza de una empresa privada, la ciudad de Cascavel-Pr. Métodos: 60 mujeres fueron entrevistadas entre 18 y 60 años de edad, los empleados de la limpieza de una institución privada de educación superior, Facultad Asís Gurgacz - FAG en la ciudad de Cascavel-Pr. Un cuestionario, escrito por los propios investigadores, aplicada en junio de 2014, se preparó el tiempo que los empleados estaban disponibles. Para el análisis estadístico, los datos fueron tabulados en Microsoft Office Excel 2007 y analizados utilizando el software SPSS 15.0. Resultados: el 90% de las mujeres tienen venas varicosas, de éstos, el 66,7% tienen telangictasias, varices de calibre 23,3% más, y el 10% garantizado de no tener venas varicosas. Se encontró que el aumento de la edad aumenta la incidencia de venas varicosas, el castaño y la raza blanca tiene una mayor participación, pero los factores de riesgo como el índice de masa corporal, el sedentarismo, la genética y la medicación no influye en la presencia de venas varicosas esta muestra. Conclusión: El estudio reveló una alta prevalencia de várices en los empleados de limpieza de la institución y que hay una necesidad de desarrollar programas de salud para la prevención, diagnóstico y tratamiento de esta enfermedad.

**PALABRAS CLAVE:** prevalencia, factores de riesgo, las venas varicosas.

**PREVALÊNCIA E FATORES DE RISCO DE VARIZES DE MEMBROS INFERIORES ENTRE AS FUNCIONÁRIAS DE LIMPEZA DE UMA INSTITUIÇÃO PRIVADA, DO MUNICÍPIO DE CASCAVEL - PR**

**RESUMO**

Introdução: As varizes caracterizam-se como tortuosidades, alongamentos e aumento do diâmetro das veias dos membros inferiores. A doença venosa é um problema de saúde pública importante. Objetivo: verificar a prevalência e fatores de risco de varizes de membros inferiores nas funcionárias de limpeza de uma instituição privada, do município de Cascavel-Pr. Métodos: foram entrevistadas 60 mulheres, dos 18 aos 60 anos de idade, funcionárias de limpeza de uma instituição privada de ensino superior, Faculdade Assis Gurgacz – FAG, na cidade de Cascavel-Pr. Foi elaborado um questionário, de autoria dos próprios pesquisadores, aplicado no mês de junho de 2014, no horário em que as funcionárias encontravam-se disponíveis. Para a análise estatística, os dados foram tabulados no Microsoft Office Excel 2007 e posteriormente analisados pelo software SPSS 15.0. Resultados: 90% das mulheres possuem varizes de membros inferiores, destas, 66,7% possuem telangictasias, 23,3% varizes mais calibrosas, sendo que 10% garantiram não apresentarem varizes de membros inferiores. Verificou-se que o aumento da idade, aumenta a incidência de varizes de membros inferiores, a raça branca e parda apresenta maior acometimento, porém os fatores de risco como IMC, sedentarismo, genética e medicamentos não influencia diretamente na presença de varizes de membros inferiores nesta amostra estudada. Conclusão: O estudo revelou alta prevalência de varizes de membros inferiores nas funcionárias de limpeza da instituição e que há a necessidade da criação de programas de saúde voltados para prevenção, diagnóstico e tratamento desta doença.

**PALAVRAS-CHAVE:** prevalência, fatores de risco, varizes de membros inferiores.