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ORIGINAL ARTICLE

Varicose Veins Among Different Occupational Background in City of Mosul-Iraq

HANADY JABAR MAHMOOD[a], RADHWAN HUSSEIN IBRAHIM[b]*, MOHAMMAD FARIS ABDULGHANI[C], ZAINAB FAISAL AL-ZAIDY[D]

[a]*Department of Clinical Nursing Sciences, College of Nursing, University of Mosul, City of Mosul, Iraq*
[b]*Department of Clinical Nursing Sciences, College of Nursing, University of Mosul, City, Iraq*
[c]*Department of Clinical Nursing Sciences, College of Nursing, Ninevah University, City of Mosul, Iraq*
[d]*Department of Clinical Nursing Sciences, College of Nursing, University of Mosul, City of Mosul, Iraq*
**Correspondence to Dr. Radhwan Hussein Ibrahim, E mail: prof.dr.radhwan@uomosul.edu.iq.*

ABSTRACT

Background and aim: The Objectives of the present study to determine the VV among people with different background occupations in the City of Mosul, Iraq.

Materials and method: A cross-sectional study was performed at Mosul Teaching Hospital between November 2019 and February 2020. Two hundred people who were physically examined represented different jobs in Iraqi society (Nurses, address, Policemen, and teachers). A physical examination was conducted of all participants who agreed to engage in this study.

Results: The overall prevalence rate of VV among different occupational backgrounds in the City of Mosul is 19.5%. The study found that the percentage of men (50.5%) and women (49.5%). Most of the patient was beyond to age group (41-45) years and the mean age of the participants was (39.1+3.1). According to the BMI, the results indicated that most subjects belong to a class<30 (77%).

Conclusions: The nurses will seek to prevent excessive extended occupational standing and using sitting or walking when appropriate. As a result, an improvement in clinical practice may reduce the incidence of vascular disease.

Keywords: Varicose, Veins, Occupational

INTRODUCTION

Varicose veins (VV) might source of pain to the lower limbs and medical complications, sometimes involving surgery or other managements procedures, challenging health care expenses and reducing employees ' efficiency.(1).VV prevalence varies greatly in different regions, being the largest in the developed countries; usually 10 to 30 percent among men and 25 to 55 percent in population-based trials among ladies.(2) Each vein has a series of uniform valves that prevent the blood in the veins from returning to the lower legs and feet. If these valves are weakened, the blood will leak through it and move back to its previous position, so it accumulates over the valve below it, and this accumulation of blood or stagnation causes the veins to expand and swell prominently above the surface Skin, varicose veins component(3). In relation to risk factors, Women are more likely than men to develop varicose veins that are physiologically linked. Pregnancy, obesity, menopause, age, extended standing, leg injury and abdominal pain are other related factors. Less common, but not exceptionally, varicose veins can be due to other causes, such as chronic alcohol consumption, due to the side effect of vasodilation in relation to gravity and blood viscosity(4). To diagnose varicose veins, the clinician performs a physical examination that also includes observing the legs in a standing condition, to see if there is swelling. Sometimes the doctor may also ask to describe what aches are in the legs.(5). The patient may need an ultrasound to see whether the valves in the veins are operating normally or there is evidence of a blood clot. In some non-invasive checks, the technician places a small handheld device (converter) the size of a bar of soap, on the skin of the area being examined. The adapter conveys images of the veins from the legs to a screen so that the technician and the doctor can see them(6). This study aimed at determining the factors associated with occurrence of Vein Varicose related to occupational effect in City of Mosul, Iraq

METHODS

Study design: A cross-sectional study was performed at Mosul Teaching Hospital, between November 2019 and February 2020.

Study subject: Two hundred people who were physically examined represented different jobs in Iraqi society (Nurses, address, Policemen, and teachers).

Case finding: A physical examination was conducted of all participants who agreed to engage in this study. Participants were asked to stand for at least ten minutes before the examination and observe the leg area. The diagnosis was based on national institute for Health and care Exultance NICE guidance[7]. This recommendation includes the treatment and management of varicose veins in individuals aged 18 years and over. It seeks to ensure that people understand the treatment options for varicose veins, and that health care providers know when to refer patients for specialist assessment and treatment. The Clinical-Etiology-Anatomy-Pathophysiology) (CEAP)[8] classification is an widely recognized standard for identifying patients with chronic venous disorders and it has been used for recording clinical research results in medical journals was used in the current study . For ethical considerations written consent and signed by the participants has been obtained. Statistical analysis was done via SPSS version 25. numbers and percentages were used to presented study results. Odds ratio was calculated to determine the risk factors of VV.

RESULTS

The overall prevalence rate of VV among different occupational background in City of Mosul is 19.5%. The study found that the percentage of men (50.5%) and women (49.5%). The majority of patient was beyond to age group (41-45) years and the mean age of the participants was (39.1+3.1). According to the BMI, the results indicated that most subject belong to a class<30 (77%). With regard to the number of working hours standing, the results showed that most of the study sample do their working standing for more than 8 hours per day. The smoking habit was for the members of the sample (53%), alcohol consumption (11%).

Table 1: characteristics of study sample

Gender	No	%
Male	101	50.5
Female	99	49.5
Age Group	200	100
20-25Y	10	5
26-30Y	24	12
31-35Y	25	12.5
36-40Y	34	17
41-45 Y	66	33
46-50Y	41	20.5
BMI		100
>30	66	33
<30	144	77
Limb	200	100
Rt	64	32
Lt	58	29
Both	78	39
Job	200	100
Nurses	27	13.5
Addresses	21	10.5
Policeman	26	13
Teacher	24	12
Others	2	1
FH	No	%
Yes	124	62
No	76	38
Smoking	No	%
Yes	106	53
No	94	47
Alcohol	No	%
Yes	22	11
No	178	89
Standing	No	%
>8	102	51
<8	98	49

Table 2: symptoms of VV distribution among the patient

Symptoms	Male%	Female%	Total %
Edema	44	43	45
Lipodermatosclerosis	11	6	8
Pigmentation	17	18	17
Eczema	11	11	15
Healed ulcer	3	2	2
Active ulcer	5	2	3
Thrombophlebitis	7	8	8
Pulmonary embolism	1	6	1
Bleeding	1	4	1
Total	100	100	100

Table 3 Distribution of clinical classification of varicose veins (n=200)

Clinical classification of CEAP	%
C0: No visible veins	66
C1: Reticular veins	6
C2: Varicose veins	4
C3: Edema	17
C4a: Pigmentation or eczema	3
C4b: Lipodermatosclerosis	1
C5: Healed venous ulcer	2
C6: Active venous ulcer	1

DISCUSSION

For many people, varicose veins - a diffuse and light type of varicose veins - are only a cosmetic problem. For others, varicose veins can cause very severe pain and discomfort. Varicose veins can sometimes lead to more severe complications and problems. In some cases, they pose a risk of other diseases related to blood flow to the body. Varicose veins treatment may be limited to self-treatment methods or methods, or it may require physician-implemented procedures to block or remove veins. In the present study, we measured factors with respect to age, sex, and occupation and clinical profile as per Clinical, Etiologic, Anatomical, Pathophysiological classification of varicose veins. The incidence is slight in native Africans or Australians (0 to 5%)[9,10] and high in Western countries (25% to 75%)[11,12,13]. These examinations highlighted that the prevalence of VV is (19.2). This substantiates previous findings in the literature. The prevalence of varicose veins is 14% in adult population of the Kingdom of Saudi Arabia[14].. In Finland 13.5% / 1000[15], USA (15%)[16], and among Turkish people the total prevalence of VV was 36.7%[17]. In our study, 70% of patients were males and 30% patients were females. Our findings are in accordance with the study of Vashist et al. which showed 64% of males and 36% of females[18]. It has been shown that varicose veins are more common in women but that female sex is not a significant risk factor[19]. Similar finding was noted in a study done in Ahmedabad, Gujarat, India, where the risk of varicose vein was 13% over the age of 45 among 100 participants[20]. The study of Lee et al., Edinburgh Vein Study shown the prevalence of 40% in men and 32% in women[21]. Prevalence of VV among Italian people was significantly influenced by sex, with the figure being twice as high in women (35.2%) than in men (17%)[22]..Increasing age has been correlated with greater risk of forming varicose veins, according to the findings of the study. The findings are close to those of another research in this field[8,23-27]. Data from epidemiological trials suggests that abdominal obesity is related to an increased incidence of severe venous insufficiency (CVI) and decreased risk of venous thromboembolism (VTE).1-6 Venous stasis that causes VTE and CVI is believed to be predisposed to obesity. Central obesity is associated with higher intraabdominal pressure[28]. Our experiments confirm previous study findings that found there is a longitudinal pattern of elevated incidence of varicose veins at higher rates of BMI, and there is a substantial excess chance of venous disease in menopause for values greater than 30 kg / m2. Wall assumed that Overweight patients have elevated intestinal pressures impeding venous drainage from the legs contributing to reflux[29]. In addition, despite

clarification for certain risk factors, venous insufficiency is correlated strongly with cigarette use. The correlation was observed in all age categories, for both men and for women. The Framingham research[30] is, to our awareness, the only other epidemiological review that has shown that varicose veins coexisted with higher smoking rates for adults. In India[31], a study survey found that 12.9% of traffic police staff had varicose veins, while other surveys performed by Satapathy et al and Pareshprajapati et al recorded that only 4.17 percent had varicose veins of legs and 2.91% had varicose veins of hands. This could be attributed to extended standing hours of work or an obesity[32]. The impact of continuous standing in front of the patient bed and heavy working hours (>8 hours / day) is the central focus of this research, we observed that both long term occupational risk factors (57.14%, p<0.001) and long working hours (38.70%, p<0.001) were substantially correlated with the lower limb VV. Similar findings were also published in a cross-sectional analysis performed by12 in Germany on 9935 civil servants. We do endorse the findings of previous studies. A retrospective research undertaken by Allesøe[33] found in Denmark found that occupations involving extended standing were correlated with a proportional probability of 1.75 for VV hospitalization. A research on female cotton staff[34] also noticed a higher prevalence of lower limb VV among those who stood up for work. A survey 18 on 387 male European staff also showed that an aggravating factor in lower limb VV was extended standing[35]. A cross-sectional analysis was performed on 203 nurses at the Amol hospitals. Questionnaire was used to collect the details needed. It was accomplished by questioning and physical medical examination using standard CEAP formats. The results found there were 145 female subjects. 73.9% (CI95 per cent: 77-65) of nurses had varicose rates. Female gender, sex, BMI (OR= 1,21), daily exercise (OR= 0,31), family history, weight, and overtime between varicose severity factors (OR= 1,01), years of service, standing (OR= 2,3) and sitting in the ward[36]..

CONCLUSIONS

Varicose veins were mainly present among employers in City of Mosul, Iraq with a prevalence of (19.5%) percent. A major risk factor for the varicose veins was identified to be extended standing. The nurses will seek to prevent excessive extended occupational standing and using sitting or walking when appropriate. At the result, an improvement at clinical practice may reduce the incidence of vascular disease.

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