

THE PREVALENCE OF VARICOSE VEINS AMONG MALE WORKERS IN AN ENGINEERING FACTORY-IRAQ

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Key Words : Varicose veins, Male workers, Engineering factory, Iraq.

نسبة انتشار حالة دوالي الساقين لدى العاملين الذكور في الصناعة الهندسية - العراق

الخلاصة

١٠٩٨ شخص من الذكور العاملين في الصناعة الهندسية ولهم خدمة أكثر من خمس سنوات تم فحصهم سريرياً بعد أن طلب منهم الإجابة على أسئلة تتعلق بالدراسة . لقد تبين أن نسبة انتشار دوالي الساقين كانت ٧.٢٪ . أن أعلى نسبة انتشار حالة دوالي الساقين كانت عند الأشخاص الذين هم بعمر ٤٠-٤٩ (١٧.٦٪) والذين لهم خدمة أكثر من عشرين سنة (١٤.٣٪) والمتزوجين (١٠.٤٪) والعاملين في الاعمال التي تتطلب الجلوس الطويل (١١٪) .
لقد وجد علاقة معنوية (القيمة المعنوية أقل من ٠.٠٠٥) بين الإصابة بدوالي الساقين وزيادة الوزن .
أوصت الدراسة وضع برنامج صحي لتقليل الوزن .

SUMMARY :

A cross-sectional survey was conducted on 1098 male employees who had five or more years of employment in an engineering factory. The prevalence rate (PR) of varicose veins (vv) was 7.2% . The highest PR of VV (17.6%) was in the age group 40-49 years and among workers employed for more than 20 years (14.3%). This condition was also more prevalent among married workers (10.14%) and among office workers (11.0%) . A statistically significant association ($P < 0.005$) was found between increased body mass index (BMI) and VV. Weight reduction programs were recommended.

INTRODUCTION :

The precise cause of primary VV remains unknown. The most generally accepted concept is that they develop because of a hereditary weakness in the structure of the vein (wall and valves)⁽¹⁾, so a positive family history is common. Erect posture plays a definite role in the causation of varicose sites since VV do not occur in quadrupeds. They are commonly seen in people engaged in occupations involving prolonged standing or sitting position⁽²⁻⁶⁾. The PR of VV shows a wide variation around the world; it is much higher in Europe⁽⁷⁾ and USA⁽⁸⁾, and is less prevalent

in developing countries as Africa⁽⁹⁾, Syria⁽¹⁰⁾. In Iraq, studies of PR of VV are few^(5,6). Several studies^(5-7,11-13) showed a relationship between increasing age or overweight and PR of VV. Females are affected more than males^(7,14). As no Iraqi study of PR of VV among industrial populations working in engineering factories, this study was conducted.

PATIENTS AND METHODS :

- 1- Al-Qadissya State Establishment (factory) was assigned for this study as it is one of main engineering factories in the country.
- 2- Only those with five or more years of employment were included in the study because the effects of work on health need such time or longer.
- 3- The final sample size of the study group (SG) was 1098 male workers; female workers were excluded because of their small number.
- 4- The members of the SG were working in seven different departments.
- 5- The SG was classified into skilled workers (machine workers), Non-skilled workers (manual workers) and sedentary (office) workers.
- 6- Each workers was required to reply to the specific questionnaire designed for this study.
- 7- The clinical examination included a-measurement of weight and height to get BMI, b-Inspection of the lower extremities (from above the groin to the toes) was done with the workers standing on a platform with adequate lighting; the presence of dilated, elongated and tortuous superficial veins was considered as indicating the existence of the ailment⁽³⁾.

RESULTS :

The SG had a mean age, mean length of service and a mean BMI of 30.3 years, 9.8 years and 24.1 kg/m², respectively. The PR of VV of the lower extremities among the SG in the factory was 7.9%. Table 1 shows that the highest PR of VV (17.6%) was in the age group 40-49 years, among workers employed more than 20 years (14.6%), among married subjects (10.4%), alcoholics (13.3%) and sedentary workers (11%). The relationship between the increase in body weight and VV is highly significant ($P < 0.005$); no significant association was found between the PR of VV and working in different departments, educational level of the workers, or smoking habit.

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DISCUSSION :

1089 male workers working in an engineering factory with five or more years of employment were surveyed for VV. The results show that the PR of VV among such workers was 7.2% which is less than that reported by kontos⁽¹⁴⁾(20%) in North America, but higher than that found by Hassan et.al. (1%)⁽⁹⁾ in Africa or among Syrian men working in textile factory (5%)⁽¹⁰⁾. The PR of VV in this study is very much lower than that found by Al-Abdaly among male workers in Al-Mosul textile factory (28.6%)⁽⁶⁾. The study shows that the highest PR of VV (17.6%) was among the age group 40-49; this result is in agreement with the findings of other^(5,17,18) workers. The highest PR of VV was among those who have 20 and more years of employment, while the lowest PR was among those workers who have 5 to 9 years of employment; this is consistent with the findings of Al-Abdaly⁽⁶⁾. Similar findings were reported by other workers^(5,19). The study also showed that the PR of VV are more common among sedentary workers giving a clue about the probable hazard to health that sedentary work poses. The prolonged sitting posture required by sedentary workers may be a factor in increasing venous stasis and varicosities of the lower limbs. Excessive body weight has been shown to be strongly associated with VV, so weight reduction programs should be encouraged in the workplace.

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