

Prevalence of Varicose Veins among Health Care Workers: A Cross-Sectional Study

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Abstract: *Background:* Varicose veins are a common chronic venous disorder frequently observed among healthcare workers due to prolonged standing, long working hours, and occupational stress. *Objective:* To determine the prevalence of varicose veins among healthcare workers using CEAP classification and to identify associated occupational risk factors. *Methodology:* A cross-sectional observational study was conducted among 165 healthcare workers, including surgeons, nurses, OT assistants, and pathologists, selected through stratified sampling. Demographic and occupational data were collected, and varicose veins were assessed using the CEAP classification system. Data were analysed using SPSS version 30.0. *Results:* The overall prevalence of varicose veins was 60%. Most positive cases were classified under CEAP C1–C2. Higher prevalence was observed among participants aged 45–55 years, with BMI ranging between 25–28 kg/m². Prolonged standing and long working hours were identified as major occupational risk factors. *Conclusion:* Varicose veins are highly prevalent among healthcare workers, particularly those exposed to prolonged standing. Early screening, ergonomic interventions, and preventive strategies are essential to reduce occupational venous disorders.

Keywords: Varicose veins, Healthcare workers, CEAP classification, Prevalence, Occupational health

1. Introduction

Varicose veins are dilated, tortuous superficial veins resulting from venous valve incompetence and impaired blood flow. Globally, the prevalence ranges from 10% to 60%, with healthcare workers being particularly vulnerable due to prolonged standing, repetitive movements, and extended duty hours. Occupational exposure significantly contributes to venous hypertension, leading to chronic venous insufficiency. Early detection and preventive strategies are crucial to maintain workforce health and productivity.

2. Aim

To evaluate the prevalence of varicose veins among healthcare workers.

3. Objectives

- To determine the prevalence of varicose veins using CEAP classification.
- To identify occupational risk factors contributing to varicose veins among healthcare workers.

4. Methodology

- Study Design: Cross-sectional observational study
- Study Duration: 3 months
- Sample Size: 165 healthcare workers
- Sampling Method: Stratified sampling
- Study Population: Surgeons, nurses, OT assistants, and pathologists
- Outcome Measure: CEAP (Clinical, Etiological, Anatomical, Pathophysiological) classification

Participants were assessed through clinical examination and structured questionnaires after obtaining informed consent.

5. Statistical Analysis

Data were analysed using SPSS version 30.0. Descriptive statistics were used to calculate prevalence and distribution across CEAP classes. Associations with age, BMI, gender, and occupation were analysed.

6. Results

Out of 165 participants:

- 60% showed positive findings for varicose veins
- Majority belonged to CEAP C1 and C2 categories
- Higher prevalence was observed in individuals aged 45–55 years
- Overweight participants (BMI 25–28 kg/m²) showed increased risk
- Nurses and surgeons demonstrated higher prevalence due to prolonged standing

7. Discussion

The study demonstrates a high prevalence of varicose veins among healthcare workers, consistent with previous literature. Occupational exposure, particularly prolonged standing, significantly contributes to venous disorders. Early-stage venous disease (C1–C2) was predominant, indicating the importance of early screening and preventive interventions.

8. Conclusion

Varicose veins are a common occupational health problem among healthcare workers. Prolonged standing, age, and increased BMI are significant contributing factors. Implementation of ergonomic modifications, regular screening, and lifestyle interventions is recommended to reduce disease burden.

9. Limitations

- Cross-sectional design limits causal inference
- Sample limited to selected hospitals
- Reliance on clinical assessment without routine Doppler confirmation

10. Scope for Future Study

- Longitudinal studies to assess disease progression
- Interventional studies evaluating preventive strategies
- Advanced statistical modelling for risk prediction

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