

STUDY OF THE INFLUENCE OF PAIN SYNDROME ON BLOOD PRESSURE IN PATIENTS WITH HYPERTENSION AND DEFORMING OSTEOARTHRITIS

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Relevance

Hypertension and deforming osteoarthritis are among the most common chronic diseases that significantly affect morbidity and mortality. Both conditions are associated with a high risk of cardiovascular complications, with hypertension being one of the leading risk factors for ischemic heart disease, stroke, and heart failure. Pain syndrome is a typical manifestation of osteoarthritis and has a pronounced negative impact on patients' quality of life. However, the effect of pain syndrome on blood pressure levels in patients with combined pathology remains insufficiently studied.

Aim of the study

To investigate the influence of pain syndrome on blood pressure parameters in patients with hypertension and deforming osteoarthritis.

Materials and methods

The study included 100 patients aged over 18 years, divided into two groups:

Group 1 (n=50): patients with hypertension and deforming osteoarthritis;

Group 2 (n=50): patients with hypertension only.

Inclusion criteria were a confirmed diagnosis of hypertension and/or deforming osteoarthritis and consent to participate in the study. Exclusion criteria included a history of cardiovascular diseases, pregnancy, and severe cognitive impairment.

Blood pressure was measured using a standard sphygmomanometer. Pain intensity was assessed using the Visual Analogue Scale (VAS) and the Brief Pain Inventory (BPI).

Results and discussion

In patients with hypertension and deforming osteoarthritis, blood pressure levels were significantly higher compared to patients with isolated hypertension. The mean systolic blood pressure was 152.4 ± 10.5 mmHg in Group 1 versus 135.6 ± 11.6 mmHg in Group 2 ($p < 0.001$). The mean diastolic blood pressure was also significantly higher in Group 1 — 93.2 ± 8.1 mmHg compared to 82.8 ± 7.6 mmHg in Group 2 ($p < 0.001$).

Correlation analysis revealed a strong positive relationship between pain intensity and both systolic ($r = 0.72$; $p < 0.001$) and diastolic blood pressure ($r = 0.68$; $p < 0.001$) in patients with combined pathology.

Conclusions

The findings of this study confirm that pain syndrome has a significant impact on blood pressure levels in patients with hypertension and deforming osteoarthritis. This

highlights the need for a comprehensive approach to managing such patients, including not only antihypertensive therapy but also adequate pain management. Further research is required to better understand the underlying pathophysiological mechanisms of this association and to develop effective management strategies for patients with combined pathology.

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