The clinical stages of vibroacoustic disease.

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Abstract

BACKGROUND:

Vibroacoustic disease (VAD) is an occupational disease occurring in susceptible workers who have had long-term exposure (> or = 10 yr) to large pressure amplitude (> or =90 dB SPL) and low frequency noise (< or = 500 Hz). The clinical progression is insidious, and lesions are found in many systems throughout the body. Some of the findings, such as extracellular matrix changes, appear to be specific to this disease. Others, such as cognitive impairment, seem to be common in different types of stress-induced pathology. In 1956, Professor Eugenia Andreeva-Galanina developed a classification of hand-arm vibration-induced pathology. This has been further refined and has become an important tool in occupational medicine. Thus, it is also important now to define the clinical stages of VAD in accordance with the appearance of the most common signs and symptoms.

METHODS:

We analyzed the files of 140 patients with VAD, paying close attention to the chronology of the clinical findings, the registry of eventual and on-the-job accidents, and the evaluation of disabilities.

RESULTS:

We have classified VAD in function of the time it took for 50% of the population to acquire the relevant sign or symptom. Stage I, mild signs (behavioral and mood associated with repeated infections of the respiratory tract, e.g., bronchitis); Stage II, moderate signs (depression and aggressiveness, pericardial thickening and other extracellular matrix changes, light to moderate hearing impairment, and discrete neurovascular disorders); Stage III, severe signs (myocardial infarction, stroke, malignancy, epilepsy, and suicide).

CONCLUSION:

This classification should be capable of assessing work fitness, and is a primary approach to a complex and multidisciplinary problem with implications in diagnosis, prevention and disability compensation within VAD.

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