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Influence of intensive coronary care acoustics on the quality of care and physiological state of patients

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Background Unstable coronary disease is a stressful situation and environmental influences may increase stress mechanisms important for the cardiovascular status.. **Aim** To evaluate acoustic influence on patients with coronary artery disease and to test if the effects of poor sound absorption on work environment affects quality of care and medical status of patients. **Methods** 94 patients admitted to the intensive coronary heart unit for chest pain evaluation participated. Patient groups were recruited during bad and good acoustic conditions respectively. Blood pressure, pulse amplitude, heart rate and heart rate variability were monitored. Patients were asked to fill in a questionnaire about the quality of the care and a follow up of rehospitalisation and mortality was made at 1 and 3 months. **Results** Good and bad acoustics differed significantly with respect to pulse amplitude in acute myocardial infarction and unstable angina pectoris groups, with lower values at night during the good acoustics period. Re-hospitalisations were higher for the bad acoustics group. During the good acoustics period patients considered the staff attitude much better than during the bad acoustics period. **Conclusion** Bad acoustics environment during acute illness may have important physiological effects of importance for rehabilitation.