S.S.PROMOZIONE DELLA SALUTE

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Fascicolo _____

email

Alla c.a dr Mauro PASTORELLI
Alla c.a. dr Michele GRIO

e p.c. alla c.a. Direzione Generale
alla c.a. DIPSA

ASL TO3

Ogg: Progetto: "Musica in Ospedale: musica a 432 HZ nelle rianimazioni e reparti Covid19"

Trasmetto la proposta di realizzazione del Progetto "Musica in Ospedale: musica a 432 HZ nelle rianimazioni e reparti Covid19", per vostra opportuna valutazione.

Premessa

La musica come strumento di supporto per la medicina è oggetto di numerosi studi applicati in molti ambiti terapeutici (chirurgico, geriatrico, pediatrico, piscologici, etc.)

Non fa eccezione l'area critica: gli studi disponibili ad oggi suggeriscono come la musicoterapia applicata al paziente sottoposto a ventilazione meccanica, sia un metodo efficace ed economico di riduzione dello stress e dei livelli di ansia nei pazienti, migliorando la tolleranza al trattamento. Tutto ciò si traduce in una riduzione dei tempi di ventilazione e delle relative complicanze, poiché facilita il processo di weaning, riduce l'impiego della sedazione, del dolore durante le procedure correlate all'assistenza. Ne consegue anche una riduzione dei costi stessi del trattamento.

Alcune teorie e studi promettenti, al momento non supportate da evidenza scientifica, ritengono che la musica a frequenza 432 Hz produca benefici a livello fisiologico, con impatto positivo sulle funzioni vitali.

In questo momento storico molto particolare, in cui le terapie intensive si trovano a fronteggiare l'emergenza Covid-19, la musicoterapia può rivelarsi un valido alleato per il paziente sottoposto a ventilazione meccanica e può rappresentare un supporto per il personale sanitario e non sanitario, negli immensi sforzi fisici, mentali e psicologici che sta richiedendo un evento di questa portata.

Ipotesi di ricerca

La musicoterapia (in particolare brani a frequenza di 432Hz) migliora i parametri vitali e le risposte ai trattamenti dei pazienti sottoposti a ventilazione meccanica per Covid-19.

Materiali e metodi

Ai pazienti ricoverati presso le terapie intensive e i reparti covid19 della ASL TO3 verrà fatta ascoltare quotidianamente una playlist specifica, presente gratuitamente sulla piattaforma Spotify, utilizzando possibilmente le risorse di reparto (stereo, personal computer con casse, filodiffusione).

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Valutazione

Risulterebbe di grande interesse misurare i parametri (frequenza cardiaca, pressione arteriosa, saturazione periferica e dolore - con scale NRS e/o Painad) prima e immediatamente dopo ogni sessione d'ascolto quotidiana fino alla dimissione, ma ci rendiamo conto che questo potrebbe interferire con le pratiche in atto ovvero la valutazione potrebbe richiedere un tempo supplementare di lavoro, pertanto si rimanda ad una fase successiva la raccolta di informazioni necessarie per una valutazione dopo il periodo di emergenza (valutazione ex post), con i necessari passaggi autorizzativi. Di sicuro interesse sarebbe anche raccogliere una valutazione qualitativa da parte degli operatori sanitari coinvolti, ma anche questo aspetto ci riserviamo di riprenderlo alla fine dell'emergenza.

Il progetto è stato sviluppato grazie alla collaborazione dell'Infermiera dott.sa Maria Chiara Giagu, attualmente in congedo maternità e dalla Infermiera e Psicologa dott.sa Natalia Elinoiu, referente per i progetti BenVivere e Musica in Ospedale, all'interno dei quali si è sviluppata la presente proposta.

Si allegano i riferimenti ai materiali scientifici reperiti per il progetto, disponibili anche in full text e si rimane in attesa dei vostri riscontri per attivare con l'Ufficio Tecnico le necessarie azioni per rendere operative le azioni sopra descritte.

Nel ringraziarvi per l'attenzione dimostrata, vi mando un pensiero affettuoso e grato per l'enorme impegno e la professionalità dimostrata da voi e dai vostri collaboratori.

31 marzo 2020

La Dirigente Responsabile
Dott.ssa Alda COSOLA

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Trials

STUDY PROTOCOL Open Access

Effect of a musical intervention on tolerance and efficacy of non-invasive ventilation in the ICU: study protocol for a randomized controlled trial (MUSique pour l'Insuffisance Respiratoire Aigue - Mus-IRA)

Jonathan Messika[1,2,3,12*], David Hajage[4,5,6], Nataly Panneckoucke[1], Serge Villard[1], Yolaine Martin[1], Emilie Renard[1], Annie Blivet[1], Jean Reignier[9], Natacha Maquigneau[9], Annabelle Stoclin[10], Christelle Puechberty[10], Stéphane Guétin[11], Aline Dechanet[6,7,8], Amandine Fauquembergue[6,7,8], Stéphane Gaudry[1,4,5], Didier Dreyfuss[1,2,3] and Jean-Damien Ricard[1,2,3]

Abstract

Background: Non-invasive ventilation (NIV) tolerance is a key factor of NIV success. Hence, numerous sedative pharmacological or non-pharmacological strategies have been assessed to improve NIV tolerance. Music therapy in various health care settings has shown beneficial effects. In invasively ventilated critical care patients, encouraging results of music therapy on physiological parameters, anxiety, and agitation have been reported. We hypothesize that a musical intervention improves NIV tolerance in comparison to conventional care. We therefore question the potential benefit of a receptive music session administered to patients by trained caregivers ("musical intervention") to enhance acceptance and tolerance of NIV.

Methods/design: We conduct a prospective, three-center, open-label, three-arm randomized trial involving patients in the intensive care unit (ICU) who require NIV, as assessed by the treating physician. Participants are allocated to a "musical intervention" arm ("musical intervention" applied during all NIV sessions), to a "sensory deprivation" arm (sight and hearing isolation during all NIV sessions), or to the control group. The primary endpoint is the change in respiratory comfort (measured with a digital visual scale) before the initiation and after 30 minutes of the first NIV session. The evaluation of the primary endpoint is performed blindly from the treatment group. Secondary endpoints include changes in respiratory and cardiovascular parameters during NIV sessions, the percentage of patients requiring endotracheal intubation, day-90 anxiety/depression and health-related quality of life, post-trauma stress induced by NIV, and the overall assessment of NIV.
The follow-up for each participant is 90 days. We expect to randomize a total of 99 participants.

Discussion: As music intervention is a simple and easy-to-implement non-pharmacological technique, efficacious in reducing anxiety in critically ill patients, it appeared logical to assess its efficacy in NIV, one of the most stressful techniques used in the ICU. Patient centeredness was crucial in choosing the outcomes assessed.

Trial registration: ClinicalTrials.gov: NCT02265458. Registered on 25 August 2014.

Keywords: Non-invasive ventilation, Critical care, Music intervention, Respiratory comfort

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PLOS ONE

RESEARCH ARTICLE

Music for pain relief during bed bathing of mechanically ventilated patients: A pilot study

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Competing interests: The authors have declared that no competing interests exist.

Abstract

Background

Pain is a universal issue and is of particular concern in mechanically ventilated patients, as they require intensive nursing care and multiple invasive procedures, while being unable to communicate verbally. The aim of this study was to assess the effect of music on pain experienced by mechanically ventilated patients during morning bed bathing.

Methods

Of the 60 mechanically ventilated patients enrolled in this single-center pilot study between March 2013 and October 2015, the first 30 received no music and the next 30 the music intervention, during the morning bed bath. The Behavioral Pain Scale (BPS) score was determined during and at the end of the bath then 30, 60, and 120 minutes after the bath. BPS score changes over time were assessed and the proportions of bath times spent with a BPS score $\geq$5 and with the maximal BPS score were determined.

Results

At baseline, no patient had pain (defined as a BPS score <5) and the median BPS score was 3 [IQR, 3;3] in both groups ($P = 0.43$). After bed bath initiation, 88% of patients experienced pain. The maximum BPS value during the bath was lower in the music group (5 [5;6.7] vs. 7 [5;7]). Proportions of total bath time spent with BPS$\geq$5 and with the maximum BPS were significantly lower in the music group than in the control group (2.0 [0.3;4.0] vs. 10 [4.3;18.0]; $P < .0001$ and 1.5 [0;3.0] vs. 3.5 [2.0;6.0]; $P = .005$; respectively). Two hours after the end of the bath, the BPS values had returned to baseline in both groups.

Conclusion

In our population, music significantly decreased pain intensity and duration during the morning bed bath in mechanically ventilated patients. These results warrant further assessment in a large multicenter randomized controlled trial.

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The influence of music during mechanical ventilation and weaning from mechanical ventilation: A review

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Abstract

Background—Mechanical ventilation (MV) causes many distressing symptoms. Weaning, the gradual decrease in ventilator assistance leading to termination of MV, increases respiratory effort, which may exacerbate symptoms and prolong MV. Music, a non-pharmacological intervention without side effects may benefit patients during weaning from mechanical ventilatory support.

Methods—A narrative review of OVID Medline, PsychINFO, and CINAHL databases was conducted to examine the evidence for the use of music intervention in MV and MV weaning.

Results—Music intervention had a positive impact on ventilated patients; 16 quantitative and 2 qualitative studies were identified. Quantitative studies included randomized clinical trials (10), case controls (3), pilot studies (2) and a feasibility study.

Conclusions—Evidence supports music as an effective intervention that can lesson symptoms related to MV and promote effective weaning. It has potential to reduce costs and increase patient satisfaction. However, more studies are needed to establish its use during MV weaning.

Keywords

Artificial Respiration; Mechanical Ventilator; Weaning; Airway Management; Music; Music Therapy

Introduction

Initiation of mechanical ventilation (MV)[a] to treat acute respiratory failure is a lifesaving intervention. Causes of acute respiratory failure include pulmonary disease, neuromuscular disease, shock, and major surgery.[1] Recent estimates have found that over half of all ICU

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[a]MV – mechanical ventilation

Interventional Medicine & Applied Science, Vol. 6 (1), pp. 3–15 (2014) ORIGINAL PAPER

Shortening the length of stay and mechanical ventilation time by using positive suggestions via MP3 players for ventilated patients

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Abstract: Long stay in intensive care unit (ICU) and prolonged ventilation are deleterious for subsequent quality of life and surcharge financial capacity. We have already demonstrated the beneficial effects of using suggestive communication on recovery time during intensive care. The aim of our present study was to prove the same effects with standardized positive suggestive message delivered by an MP3 player. Patients ventilated in ICU were randomized into a control group receiving standard ICU treatment and two groups with a standardized pre-recorded material delivered via headphones: a suggestive message about safety, self-control, and recovery for the study group and a relaxing music for the music group. Groups were similar in terms of age, gender, and mortality, but the SAPS II scores were higher in the study group than that in the controls (57.8 ± 23.6 vs. 30.1 ± 15.5 and 33.7 ± 17.4). Our *post-hoc* analysis results showed that the length of ICU stay (134.2 ± 73.3 vs. 314.2 ± 178.4 h) and the time spent on ventilator (85.2 ± 34.9 vs. 232.0 ± 165.6 h) were significantly shorter in the study group compared to the unified control. The advantage of the structured positive suggestive message was proven against both music and control groups.

Keywords: intensive therapy, mechanical ventilation, length of stay in ICU, positive suggestions, psychological support, cost effectiveness

Introduction

The goal of intensive care is to recover and to temporarily replace vital functions of critically ill patients [1] in order to achieve the best possible quality of life (QoL) after recovery. However, the longer the intensive care unit (ICU) treatment, the worse the quality of life expected [2] as it gives ground to physical and psychological deteriorations: the chances of complications increase [3], and the patient is more likely to encounter psychologically traumatic experiences which have well-described negative effects on the QoL [4, 5]. All of these increase the risk of post-traumatic stress disorder which puts further physical and psychological burdens on the patient, their families, and on health care expenses.

ICU treatment is an extreme psychological stress source causing physical burden, too. Patients may suddenly find themselves in an unfamiliar environment where they miss their usual confidence helping them to understand the things perceived. The difficulty in ordering perceptions into a normal pattern may lead to ICU-psychosis, which is a well-known complication of intensive care [6]. However, even without these problems, patients may develop learned helplessness [7] as a result of the deprivation of the ability to control even basic physiological needs during intensive care. Humans or animals who have learned to behave helplessly will not be able to use help or to change their inactive behavior to an active one, either they could change their conditions or they could avoid some unpleasant circum-

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