50 - EFFECTIVENESS OF HAMMOCK METHOD ON PULMONARY AND NEUROMUSCULAR MATURITY CHARACTERISTICS IN HOSPITALIZED INFANTS ON NEONATAL INTENSIVE THERAPY UNITS: SYSTEMATIC REVIEW OF THE LITERATURE

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doi: 10.16887/85.a1.50

INTRODUCTION

The baby is not exactly a miniature version of the adult, there are several peculiarities that must be taken into consideration when assessing the newborn (NB). It is a single organism, well equipped and functioning within their stage of development. It is known that, following preterm births, manifests a profile of different behaviors of babies born at term (Cavalry, 2009). For classification at birth is necessary to observe some factors such as gestational age; weight and the relationship between birthweight and gestational age (Chermont, 2010).

To better neurodevelopmental need for them is that physiotherapy use their resources properly within the NICU's. The resources used in this early intervention seeking a way to enhance the integration of the child with the environment through resource: visual, tactile and auditory order to get close to the normal standard responses and inhibition of learning movements and abnormal postures. In order to get some results such as weight gain, easy organization, promote deep sleep, minimizing stress, among others. Today many funds are used to enhance the already known, among them we can highlight: the bucket hydrotherapy, music therapy, a small net inside the incubator and massages as Shantala (SARMENTO, 2013).

A small net is one of the easiest and affordable to be used inside incubators PN resources, it brings many physiological benefits for the neurodevelopment of preterm infants that causes the patient to experience a closer approach of the comfort of the womb. To corroborate these reports this work comes in the form of a systematic review of the literature seeking to reveal how this method can be beneficial to preterm infants in the NICU.

METHOD

This is a systematic review of the literature according to the guidelines of the PRISMA (. MOHER et al 2009) .In this study a systematic review, a search was conducted in Databases: Lilacs, Medline, PubMed, SciELO and PEDro, with the following keywords and its synonym and English: Positioning "positioning" Physiotherapy "Physiotherapy", Hammock Method "Hammock Method" and Redinha took into account for this research articles published between the period 1980-2014.

For inclusion in this work will be accepted articles on the theme. The enclosed materials should have been published from 1980 to 2014. previously published work pre-established date, letters, dissertations, abstracts, theses and case reports were excluded as well as studies using animal model s.

For the selection of items, initially valuing the securities related to the topic in question took place. This selection was based on titles that have as main idea the use of the method of Hammock or any information relating to these words. At the end of the search, similar titles were excluded (since the search was conducted in several databases). Then read the detailed summaries of articles was conducted in order to select those that exclusively addressed the method of Hammock. Resumes that do not address the topic in question were included; full text and abstracts were assessed and those who fulfilled the inclusion criteria were included as a result of the search.

The articles identified in the search strategy had its title and summary reviewed by two researchers independently and "blindly", and, in case of disagreement, a third senior researcher decided by the inclusion or exclusion of the text. To evaluate the articles which contemplated the inclusion criteria of the PEDro Scale translated into Portuguese (Brazil) was used. This scale was developed by the Australian Physiotherapy Association and aims to assess the quality of randomized clinical trials published in order to guide users about the meritorious aspects of each publication and to facilitate rapid identification of studies containing sufficient information for professional practice.

The PEDro scale assesses trials across 11 pre-selected items. The first item is an additional criterion and represents the external validity (or "generalized potential" or "applicability" of the trial), not being included in the total score. The remaining items examine two aspects of the quality of the article: the internal validation (items 2-9) and the article contains sufficient statistical information to allow the results to be interpreted (items 10 and 11). These items are eligible for "applicable" or "not applicable", generating a total score ranging between zero and 10 points (MOHER, 2003) .The selected articles were analyzed and classified as "high quality" when they reached a score ≥4 points the PEDro scale, or as "low quality" when it had a score <4 on that scale (VAN Peppen, 2004). It is noteworthy that the score of the PEDro scale was not used as a criterion for inclusion or exclusion of items, but as an indicator of scientific evidence from studies.

RESULTS

A search in the databases resulted in 20 articles, of which 14 were excluded for not addressing the Hammock method. Three because they are just summaries and full texts are not available and because it is a narrative review: 06 studies, 04 studies were excluded were analyzed. At the end, two studies were included in the review. The following summary of the strategy in Figure 1.

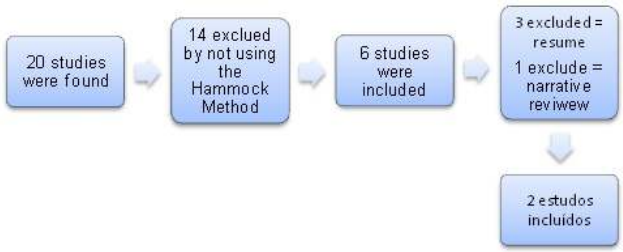

Figura 1 –Fluxogram for the searching criteria.

With the application of the PEDro scale (Table 01) articles were classified as high qualidadecom values ≥ 4 according to mesma.De according to classification can be noted that the studies did not address the subject allocation, would not comment on the initial similarity between the groups and also on the initial blinding of assessors and therapists.

Tabela 1 – PEDroScale

PEDroCriteria's	KELLER,2003	COSTA, 2004
1. Eligibility criteria were specified	NO	YES
2. Subjects were randomly allocated to groups (in a crossover study, subjects were randomly allocated an order in which treatments were received)	1	0
3. Allocation was concealed	0	0
4. The groups were similar at baseline regarding the most important prognostic indicators	1	1
5. There was blinding of all subjects	0	0
6. There was blinding of all therapists who administered the therapy	0	0
7. There was blinding of all assessors who measured at least one key outcome	0	0
8. Measures of at least one key outcome were obtained from more than 85% of the subjects initially allocated to groups	1	1
9. All subjects for whom outcome measures were available received the treatment or control condition as allocated or, where this was not the case, data for at least one key o utcome was analysed by "intention to treat"	0	1
10. the results of between -group statistical comparisons are reported for at least one key outcome	1	1
11. the study provides both point measures and measures of variability for at least one key outcome	1	0
Escore	5/10	4/10

DISCUSSION

Among the studies included both addressed the use of the method Hammock within NICUs, compared with the prone position. The sample size ranged 15-20 preterm infants of both genders, dependent or not oxygen. The time of application of the techniques ranged from 20 minutes to 3 hours daily. Among hemodynamic variables when we compared Hammock method with the prone position obtained the following results: heart rate (HR) with significantly lower values; respiratory rate (RR) without a significant change in the study of Costa et al. (2004), while for Keller et al, (2003) was significantly lower results;. Oxygen saturation (SpO2) without significant change to Keller et al, (2003).. Weight gain did not differ between groups; neuromuscular maturity was identified as a significant result, and this last two items, valued only by Keller et al., (2003).

The positioning in small net simulates intrauterine posture, encouraging the development of flexion, promoting symmetry, which certainly promote less damage to motor behavior, redinhas within incubators help keep the RN longer flexed bringing potential benefits in ventilatory pattern, such as reduced FR organization (neuromuscular maturity), minimizes the heat loss and avoids the weight support, confirming the significant findings by the authors said Keller et al. (2003), Stable (2009) and Costa et al. (2004) .The organized RN demonstrates stable heart and respiratory rate, good skin color, good tolerance and food acceptance, smooth and synchronous body movements, muscle tone appropriate for your gestational age, smooth transition between the states of sleep and waking behaviors autoconsolo like sucking of the finger and hand placement on the face and behavioral adaptation to adverse stimuli (cAVALRY, 2009). Premature newborns individuals who make use of continuous oxygen therapy may present severe hypoxemia when positioned in the network, as verified Zanardo et al. (1995).

Few studies in the literature that evaluated the effects of small net with other techniques used by physical therapy in neonatal ICU, as well as comparing with other decubitus which the infants are placed verified.

CONCLUSION

Within the articles studied we found that few evidence that fall into patterns of quality scales, once the PEDro scale showed only two articles to these criteria. Thus we can conclude that the results are mixed and it is necessary to conduct further studies to prove the method Hammock within NICUs, with better methodological

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ABSTRACT

Introduction: A small net is one of the easiest and affordable to be used inside incubators PN resources , it brings many physiological benefits for the neurodevelopment of preterm infants that causes the patient to experience a closer approach of the comfort of the womb . Objective: To conduct a systematic review of literature on the topic prospost. Methods : Systematic review in Databases : Lilacs , Medline , PubMed , SciELO and Peter , with the following key words and its synonym and English : Positioning " positioning " Physiotherapy " Physiotherapy " , Hammock Method " HammockMethod " and Redinha led themselves in consideration for this research articles published between 1980 and 2014. Results: of the six articles included only two were high quality , with cardiorespiratory, hemodynamic and other outcomes . Conclusion: The results are heterogeneous and suggest new studies with better methodological designs.

KEYWORDS: Intensive Care Unit, Positioning, Physiotherapy.

MÉTHODE EFFICACE DE HAMOOCK SUR LES CARACTÉRISTIQUES ET MATURATION PULMONAIRE NEUROMUSCULAIRE NOUVEAU-NÉ DANS HOSPITALISÉES UNITÉS NÉONATALES DE SOINS INTENSIFS: REVUE SYSTÉMATIQUE DE LA LITTÉRATURE.

RÉSUMÉ

Introduction: Un petit filet est un des plus faciles et abordables pour êtreutilisé à l'intérieur des incubateursressourcesPN ,ilapporte de nombreuxavantagesphysiologiques pour le développementneurologique des bébésprématurés qui provoque le patient à l'expérienced'uneapproche plus proche du confort de l'utérus . Objectif: procéderàunexamen systématique de lalittératuresurlesujetprosposto . Méthodes: Revuesystématiquedansles bases de données :lilas , Medline , PubMed , SciELO et Peter , aveclesmotscléssuivants et sonsynonyme et enanglais : Positionnement " positionnement " physiothérapie " physiothérapie " , HamacMéthode " HammockMethod " et Redinha conduiteux-mêmesencontrepartie de cetterecherchearticlespubliés entre 1980 et 2014. Résultats: Parmilessixarticles inclusseulementdeuxétaient de grande qualité , aveccardiorespiratoire , hémodynamique et d'autresrésultats . Conclusion :Lesrésultatssonthétérogènes et suggèrent de nouvellesétudesavec de meilleuresconceptionsméthodologiques .

MOTS-CLÉS: unité de soins intensifs, de positionnement, de physiothérapie.

MÉTODO EFICAZ DE HAMOOCK SOBRE LAS CARACTERÍSTICAS Y MADUREZ PULMONAR EN NEUROMUSCULAR RECIÉN NACIDO HOSPITALIZADO EN NEONATALES UNIDADES DE TERAPIA INTENSIVA: REVISIÓN SISTEMÁTICA DE LA LITERATURA.

RESUMEN

Introducción: Una pequeñared es uno de los más fáciles y asequibles para ser utilizado dentro de incubadoras recursos PN , que traemuchosbeneficios fisiológicos para eldesarrollo neurológico de losreciénnacidos prematuros que hace que el paciente experimente unmayoracercamiento de lacomodidad de la matriz. Objetivo : Realizar una revisión sistemática de la literatura sobre el tema prosposto . Métodos: Revisión sistemática de las bases de datos :Lilacs , Medline , PubMed , SciELO y Pedro , conlassiguientespalabras clave y su sinónimo y Inglés : " posicionamiento " " Fisioterapia " Posicionamiento Fisioterapia , Hamaca Método " HammockMethod " y llevaron Redinha a símismosenconsideración para este artículo de investigación publicados entre 1980 y 2014. Resultados : de los seis artículos incluidossólo dos eran de alta calidad , concardiorrespiratoria , hemodinámica y otros resultados . Conclusión: Los resultados son heterogéneos y sugierennuevosestudiosconmejoresdiseños metodológicos .

PALABRAS CLAVE: Unidad de Cuidados Intensivos, Posicionamiento, Fisioterapia.

EFETIVIDADE DO MÉTODO HAMMOCK NAS CARACTERÍSTICAS PULMONARES E MATURIDADE NEUROMUSCULAR EM RECÉM-NASCIDOS INTERNADOS EM UNIDADES DE TERAPIAS INTENSIVAS NEONATAIS: REVISÃO SISTEMÁTICA DA LITERATURA.

RESUMO

Introdução: A redinha é um dos recursos mais fáceis e acessíveis para se utilizar dentro das incubadoras com os RNPT, ela trás muitos benefícios fisiológicos para o desenvolvimento neuropsicomotor do RNPT que faz com que o paciente vivencie uma postura mais aproximada do conforto do útero materno. Objetivo: Realizar uma revisão sistemática da literatura sobre o tema prosposto. Métodos: Revisão sistemática nas Bases de Dados: Lilacs, Medline, PubMed, Scielo e PeDRO, com as seguintes palavras chaves e seu sinônimo e inglês:Posicionamento “positioning”, Fisioterapia “Physiotherapy”, Método Hammock“HammockMethod”, e Redinha, levou-se em consideração para esta pesquisa os artigos publicados entre o período de 1980 a 2014. Resultados: Dos seis artigos incluídos, apenas dois apresentaram qualidade alta, apresentando desfechos cardiorrespiratórios, hemodinâmicos e outros. Conclusão: Os resultados são heterogêneos e sugerem-se novos estudos com melhores desenhos metodológicos.

PALAVRAS-CHAVE: Unidade de Terapia Intensiva, Posicionamento, Fisioterapia.