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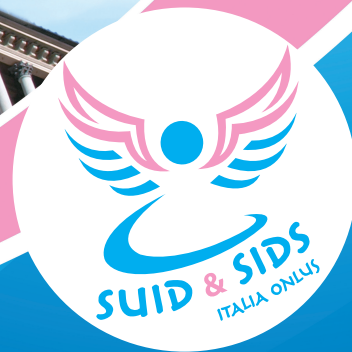
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Abstract *in* competition



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0010 A

Title: Management of infants with a Bordetella Pertussis (BP) infection at “Hôpital Universitaire Des Enfants Reine Fabiola” (HUDERF), Brussels, Belgium.

Authors: P. Perlot, P. Couillandre and S. Scaillet
“Hôpital Universitaire Des Enfants Reine Fabiola” (HUDERF), Brussels, Belgium.

Background

Infants who are not completely immunized for Bordetella Pertussis (BP) are at risk of contracting the infection. These infants are often aged between birth and 6 months, which places them in the risk period for SIDS.

While the detection and treatment of the infection is relatively straightforward, the discharge from the hospital is often rapid, and there remains uncertainties as to how the child will fare during sleep while he continues to recover from the infection at home.

Objectives

At “Hôpital Universitaire Des Enfants Reine Fabiola (HUDERF), the attitude is to give the child at discharge a cardiorespiratory (CR) monitor with a memory, to be used during the child’s sleep. The question remains how long should the monitor be used.

Methods

This is an observational study of a cohort of 14 infants hospitalised at HUDERF between march 2016 and May 2019.

Results

The average age at diagnostic (PCR) was 74 days (median 63; min 26; max 143). 9 of these infants had a polysomnography (PSG) an average of 65 days after the day of diagnostic (PCR), and 7 of them had a normal PSG. Three infants had an abnormal PSG, with an unusual amount of obstructive events during sleep.

The 7 infants with a normal PSG had an average surveillance time at home (during sleep) of 73 days (median 71; min 46 and max 105 days).

Conclusions

On the basis of the observations described in this short study, it seems safe to recommend that young infants within the ‘at risk period for SIDS’ who contract a BP infection requiring hospitalization benefit from a home cardio-respiratory surveillance during sleep for an average period of 2 months past infection date.

0011 A

Title: SIDS and ANTI-SIDS: Primary prevention of “cot death”

Author: J. Versino
Regina Margherita Children’s Hospital, City of Health and Science of Turin, Turin, Italy

Background

SIDS is the third cause of death in infants between one month and one year and represents the 8% of all the deceases in infantile age. This syndrome manifests itself with the death of the child, so it’s necessary for families to have a good knowledge about risk and prevention factors of this syndrome. Health professionals who have contact with parents must be well prepared on this subject, so they can make a clear and correct education, essential for SIDS’ prevention and tutelage of life.

Objectives

The objective of this work is to observe the clinical practice realized in born centers of Turin and Turin's first hinterland, to verify the adherence to the actual literature on SIDS' prevention.

Methods

This investigation is a multicentric transversal observation study. The sample survey includes 725 newborns: 586 observed during the rest, 516 in their cots and 70 in bed sharing; 139 unobserved because awake.

To scan those data it's been used Microsoft's Excel Professional software.

Results

The results obtained show that in most of the cases information is correct and efficacious. But some health professional's indications sometimes are discordant with scientific literature. The data of newborns sleeping in their cots reveal: 79.84% of correct posture, 100% mattress' conformity, 98.45% pillow's lack, 92.53% right level of the coverlet, 60.66% lack of short ropes or objects near the face of the baby, 91.86% adequacy of temperature and change of air in the room, 100% right distance of the baby from heat sources. The data of bed sharing show that the posture is correct just for 51.43%; only 25.71% the use of the coverlet is right.

Conclusions

The survey should be continued to obtain most important results. Health professionals should receive updates and learning about this tricky and important topic, easy to prevent, to give a better assistance and to protect life's sacredness.

0012 A

Title: Between guilt and shame. Perinatal mourning in a cross-cultural perspective.

Authors: A. Provera, G. Gandino

Department of Psychology, University of Turin

Background

Perinatal mourning is one of the most difficult and complex experiences of loss to be elaborated; this happens because of its characteristics that make it a dramatic, paradoxical and traumatic event, as well as socially denied as it is not visible. The following work is inspired by the hypothesis that cultural differences, particularly between collectivist and individualist societies, can influence the experience of the woman who suffers this type of loss both at the individual level, in the subjective experience and in family relationships, and at the collective level, in terms of social relations with the community to which they belong.

Objectives

The paper proposes a reflection on the theme of perinatal death in a cross-cultural perspective, going to investigate the role and impact of the culture and society of belonging in influencing the subjective experiences of mothers who have suffered a perinatal loss. The hope is that this work may also have an implication in clinical practice, providing operators in the sector with additional ideas for an increasingly personalized treatment tuned to the needs of those who have suffered a perinatal loss.

Methods

The work was carried out through an analysis of the existing literature. As far as the choice of the cultural contexts taken into consideration is concerned, with respect to the societies characterized by an individualistic type of organization, reference was made to research conducted in Western societies.

As far as collectivist cultures are concerned, instead, the field of analysis has been limited to the Ethiopian context only for reasons that concern the availability of study material and the impossibility of reducing all the cultural diversity present in Africa under a single all-inclusive category .

Results

Starting from the distinction between collectivist and individualist societies, theories on sociocultural factors that influence the construction of a concept of self, respectively interdependent on the one hand and independent of the other, have been taken into consideration. From the analysis of the literature it emerged how the formation of a structurally and functionally interdependent rather than independent Self leads the woman to experience feelings of shame, in the first case, or of guilt, in the second case, following a perinatal loss.

Conclusions

Perinatal loss is a phenomenon whose evaluation and consequences vary considerably from culture to culture. In this age marked by great migratory flows, it is desirable to take into account the cultural diversity with respect to which women attribute meaning to the event; in fact, being aware of the differences that can characterize a woman's experience, also based on her cultural belonging, can be indispensable to approach her experience adequately, in order to bring support in a personalized and effective way.

0013 A

Title: SIDS: protection of the newborn and infant. Survey on the knowledge about risk reduction in standard care

Authors: G. Tavormina¹, S. Silenzi², R. Pomo³

¹ Marche Polytechnic University;

² Ost.-Gin Clinic. Ancona;

³ SIDS-ALTE Region of Sicily reference center

Background

SIDS is the name given to the sudden unexplained death of a baby during sleep. One of the most influential hypotheses explaining its mechanism is the etiology-pathogenetic model of triple risk: biological vulnerability, risk factors and the critical age group. The American Academy of Pediatrics (AAP) promotes actions that significantly reduce the risk in the first year of life (safe to sleep). In the countries where the phenomenon is monitored, the containment of these factors has made it possible to lower mortality by 50%: to date SIDS affects about one infant every 2000 births.

Objectives

This study aims to verify the knowledge about SIDS in the population, through a survey on care standards.

Methods

The study consists of two investigations. The first one was an Online questionnaire addressed to all women of childbearing age on a national scale; it received 1265 answers. The second one was a sample study, aimed at producing representative estimates of the Health District of Ancona, through paper questionnaire administered to parents of children between the 2nd and 4th months of life on the occasion of the first vaccination session (100 answers obtained).-

Results

The first questionnaire established that 21.1% cases were not aware of the existence of SIDS, the

remainder part instead claimed to have collected information by mass media (80.7%); consequently 37.2% do not know any preventive measure to reduce the risk. From the results it can be seen how the interest on such information grows exponentially, considering that 75.9% cases declared that the childbirth class is the most favorable setting for divulgation. The second questionnaire investigated the putting into practice of such behavioral norms in the territorial reality of Ancona, with a similar estimate of the insufficient information of the parents, even in greater number: in everyday life 20% cases smoked in pregnancy and 10% cases smoked in lactation, 50% cases adopted an excessive environmental temperature.-

Conclusions

The SIDS Center in Palermo has conducted a similar assesment on standards of care in the Sicily region. From the discordance of the answers obtained in the comparison between Sicily and Marche, it results evident that the information on the syndrome and on its prevention is not sufficient, nor homogeneous; an interregional health intervention is necessary, through a network of information that confers greater awareness to parents. The purpose of this verification therefore becomes the design of an information campaign that aims to prevent the phenomenon.

0014 A

Title: When pregnancy interrupts: perinatal loss in the couple

Authors: G. Gandino, A. Sensi, I. Vanni

Department of Psychology, University of Turin

Background

The term perinatal loss refers to the death that occurs in the last gestational weeks, at birth or during the first week of the child's life. There the loss of a child in the gestational period can be defined as an "invisible death" as it happens in a hidden space: the mother's womb. It is also a little socially recognized loss, which obliges the parental couple to integrate the emotions of joy at the expectation of one new life with the sudden suffering of the unexpected death experience.

Objectives

The objective of the work is to investigate the psychological repercussions of perinatal loss on the couple. The couple is expected to have differences with respect to intensity and manifestation of the mourning process. Furthermore changes are needed, which concern the structure and the couple dynamics, interpersonal and communication skills and the delicate area of sexuality.

Methods

The work presents a review of the literature through the questioning of the main psychological databases.

Results

The number of international studies dealing with the operation of the couple after a perinatal loss is reduced. The works mostly do not adopt a systemic perspective and only partially address the different roles of different family members and complex emotions that must be managed with respect to perinatal mourning. In addition to addressing communication difficulties at the family level, parents who suffer a perinatal loss experience aspects of ambiguity even in terms of the couple's relationship in a dance between the surroundings distance: if on the one hand the search for proximity and the opening towards the other emerge, on the other avoidance and relational withdrawal appear. The different ways of facing and expressing mourning, if not supported by good communication, can lead to the relational deterioration; otherwise, when the dyad is characterized by a good capacity

for communication and understanding of life of the other then the mournful event can turn into a resource for the bond itself, and reinforce it.

Conclusions

When couples react as a unit and implement strategies together they show a better adaptation to the loss; vice versa, frictions emerge when individual needs arise and come into opposition. Awareness about the onset of possible couple functioning issues is a protective element. The presence of a comprehensive and welcoming family context and the possibility of using a dedicated listening space, where each partner can feel supported, accompanied and recognized in his pain, also turn out important in the resolution of the bereavement mourning.

0015 A

Title: The paradox in obstetrics: perinatal loss and repercussions on health workers.

Authors: G. Gandino, I. Vanni

Department of Psychology, University of Turin

Background

Perinatal loss is a silent death, a paradoxical event that occurs in spaces dedicated to the birth of new lives. Healthcare professionals are in check, in place of life they find themselves accepting death. These events, if not processed, affect the well-being of all personnel involved and can compromise the quality of the service offered.

Objectives

The research set the following objectives: 1) to investigate the experiences and emotions of the health professionals who in their clinical practice are facing perinatal losses; 2) understand how their experiences affect the perceived level of well-being.

Methods

Research was conducted in 2012/2013 and was attended by 16 hospitals in Piedmont Region, with a total of 485 health workers involved (doctors, obstetricians, nurses, OSS). The investigation was conducted through the administration and analysis of three questionnaires: one specific on perinatal loss care (The perinatal loss care intervist-HP), one for the detection of burnout (MBI-HSS inventory) and the last one on coping strategies (short COPE), in addition to detecting the socio-demographic variables.

Results

The majority of hospital staff do not have received specific training on the subject of mourning; this fact affects the perception of self-efficacy: those who have received specific training feel more competent both in the professional and personal sphere with respect to those who have not received training. Perceiving of not having the skills to face the tragic events prejudices the operators' well-being and the quality of the relationship with their patients. Compared to the risk of burnout, our sample is positioned below the standardized average of Italian health workers; nevertheless, perinatal deaths are a potential risk for the well-being of health professionals, not only from the professional but also from the personal point of view.

Conclusions

Perinatal deaths involve health professionals personally and professionally. Although the gynecology and obstetrics departments are "joyful" places in which new lives are welcomed, we must not deny the emotional impact that perinatal deaths have on staff. The lack of specific training and processing space compromises the well-being of both the operators and the patients receiving care.

Title: The safe to sleep campaign:survey about knowledge on SIDS prevention rules in Sicily Region

Authors: D. Cigna, R. Pomo

SIDS-ALTE Reference Center of Sicily Region, Buccheri La Ferla FBF Hospital, Palermo

Background

The Sudden Infant Death Syndrome consists in the sudden death of a child under one year of age unexplained after a thorough investigation, including a detailed examination of the circumstances and the place where the death occurred, the review of the clinical history and of a complete autopsy. SIDS is responsible for 40% of post-neonatal deaths; 90% of children who died of SIDS have not completed 6 months of life with a maximum incidence between 2 and 4 months. Following several studies, the American Academy of Pediatrics has renewed its recommendations for sleep disorders, "Safe to sleep", to promote actions that make the child's sleep safe in the first year of life and that allowed for a marked reduction the risk of SIDS. This work stems from the need to spread the value of prevention, the most effective weapon we have to fight against this syndrome.

Objectives

The survey aims to verify the spread of knowledge about SIDS among the parents of the children subjected to the first vaccination.

Methods

This is a transversal multi-center descriptive study. Thanks to the collaboration of the Epidemiological Department of Health, the information was collected in the vaccination centers present in the Sicily region by administration of a questionnaire to parents of children between the second and the fourth month of life on the occasion of the vaccination session. The questionnaire was distributed to all Sicilian provinces from 1 to 30 May 2015. The total number of questionnaires collected is 2903.

Results

The data collected are significant because they testify that awareness of the main care standards is not yet unanimous due to some factors such as socio-economic status or level of education. The results show that the lateral position (29%) is still adopted even though it is not safe. The combination of prone / cigarette smoking position increases the risk by over 55%; unfortunately about 10% of mothers who usually adopt the prone position in a cradle for their child also smoke while breastfeeding. The percentage of those who practice bed-sharing and at the same time smoke while breastfeeding is around 10%. Lastly, from the data there is no high adherence to breastfeeding, as around 60% of mothers claim to use mixed or artificial feeding.

Conclusions

In 1994, the situation in Sicily was alarming because the knowledge concerning the SIDS prevention rules was not yet widespread and mortality rates were high. Thanks to the spread of the Safe to Sleep campaign, the incidence of SIDS in recent years has decreased considerably. The effectiveness of the information campaign also depends on the involvement of the population, for example through "ad hoc" occasions, posters, brochures, videos and even gadgets. The information campaign on Sudden Infant Death Syndrome must therefore be homogeneous in communication, widespread and exportable, and must also include a surveillance system through verification in the population.

0017 A

Title: SIDS and co-sleeping: a survey among mothers and an educational proposal

Authors: V.Basile, L.Puglioli

University of Florence School of Human Health Sciences, Degree Course in Obstetrics

Background

The Sudden Infant Death Syndrome (SIDS) is the sudden death of an infant, also referred to as “cot death” and can affect children in the first year of life. The causes are still unknown but some preventive behaviors to be implemented are known. Among the factors recognized as protective for SIDS are: to put the newborn to sleep on his back, in a separate crib on a mattress rigid and exclusive breastfeeding. It is also known that there are factors that rise the incidence; among the most important there are: to put to sleep the newborn prone, to fall asleep on the couch, to use blankets or pillows that could cover the baby’s face, to have a body temperature excessive and cigarette smoking. Currently the literature does not provide a unique version on the practice of Co-sleeping: in fact some studies describe this practice as a protective factor integrating it into the physiology of newborn’s sleep. Other works, instead, including Italian guidelines, advise against adopt this practice because it is associated with an increased risk of SIDS.

Objectives

To understand knowledge about the SIDS phenomenon and the practice of Cosleeping in the Italian population by a survey.

Methods

A questionnaire containing 21 questions on 3 main topics:

1. Sample information
2. Behaviors and habits adopted
3. Knowledge and information sources on SIDS and Co-Sleeping

was elaborated through google doc and shared via Facebook 2495 people spontaneously joined the questionnaire. The sample obtained was stratified according to age, educational level and Parity.

Results

In 87.9% cases the couples have obtained information on SIDS; the first source of information on SIDS are the Birth Accompanying Courses (38.5%), followed by web information (27.9%), mixed information (books, information leaflets, magazines) (22.2%) while only 11.4% obtain information during their stay in the hospital.

The results show an inversion of the established strategies to take care of the baby at night before and after delivery. The practice of Co-Sleeping before birth was considered as an option in 10.9% cases; 59.1% cases adopted it of cases after birth.

The level of exposure of the newborn to the best known risk factors was also investigated.

Conclusions

The data emerged from the study show that co-sleeping is adopted by couples in 59% cases (especially in mothers who carry out exclusive breastfeeding, 76% in our study) despite being aware that this practice is considered risky for the development of SIDS, (especially if associated with other risk factors known). The data of the study are in line with those emerging from the literature, that recognize the high adhesion to the practice of co-sleeping: therefore it becomes fundamental a complete and adequate information based on evidence in order to guarantee an informed choice of couples and full safety in caring the newborn.

Title: Main characteristics of sudden and unexpected deaths caused by Respiratory Syncytial Virus

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Background

Respiratory syncytial virus (RSV) can cause respiratory tract infections in newborns. They can cause fever, cough and rhinorrhea. The virus can colonize the lower airways causing bronchiolitis and interstitial pneumonia, and may cause marked impairment of gas exchange up to sudden death with characteristics similar to the sudden infant death syndrome (SIDS). The involvement of the lung is difficult to identify due to the non-specificity of the symptoms and the involvement of the pulmonary interstitium.

Objectives

The analysis identifies the clinical, autoptical and histological characteristics of the sudden deaths from RSV. In addition, the study notes the existence of possible clinical-diagnostic-therapeutic recommendations aimed at averting these types of deaths.

Methods

A retrospective analysis (January 2018 - July 2019) of the clinical, autopsical and histological data of all the lethal cases of RSV infection observed at the Pathological Anatomy of the Città della Salute e della Scienza di Torino is proposed.

Results

Three cases of death due to VRS were detected. Two deaths related to male infants of 21 days and 4 months of life respectively. The third related to a 1-year-old and 3-month-old girl. In two cases out of three older siblings and / or sisters they were contextually affected by rhinitis. The onset was characterized by non-specific symptoms and silent objective examination. In all cases the evolution of the pathology led to sudden death without any diagnostic suspicion. The microscopic examination of the lungs showed extensive atelectasis areas and inflammatory infiltrate. The bacteriological examination highlighted VRS positive in all three cases.

Conclusions

The analysis of the clinical course of the sample in question confirms what has been expressed in the literature regarding the concrete possibility that the deaths determined by RSV have characteristics in common with those referable to SIDS. In fact, the careful bacteriological and histological analysis in all three cases analyzed was fundamental for the correct differential diagnosis. Furthermore, the present study allows us to point out that the simultaneous existence of rhinitis in siblings and / or sisters should pose the clinical suspicion for RSV infection. In addition, the literature analysis highlights the possibility of preventing such deaths thanks to the prompt execution of the VRS test on aspirate or nasal wash.

0019 A

Title: Infants' sleep habits during the 1st year of life: an international multicentric study

Authors: S. Noce¹, M. Farioli¹, G. Costagliola¹, C. Campanella¹, S. Costa¹, S. Scaillet², I. Kato³

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² University of Mie, Japan

³ Hopital Universitaire Reine Fabiola, Brussels, Belgium

Background

Sudden unexpected infant death represents the main cause of death within the 1st year of life in industrialized countries, excluding the perinatal period. Although a certain cause has not yet been identified, several risk factors seem to take part in the tragic event. For this reason, dealing with the conditions of risk and widely disseminating the recommendations developed during the years is of primary importance.

Objectives

Our Centre has joined a multicentric study together with University of Mie (Japan) and University Hospital Reine Fabiola of Brussels (Belgium) in order to analyse infants' sleep habits in different socio-cultural contexts better to address the recommendations to the parents and improve prevention.

Methods

Administration of an anonymous questionnaire to the parents of infants who turned for ultrasound screening of congenital hip dysplasia at the Regina Margherita Children's Hospital in Turin and to parents of children under 12 months who presented to our Centre for an episode of Apparent Life-Threatening Event.

Results

75 questionnaires were collected over the course of one year (July 2018-july 2019).

The sample under examination had a mean age of 3.17 months \pm 1.422. 57.3% of the babies are first-born children. More than 70% among the parents interviewed were married couples of Italian nationality and had a high cultural level (diploma or graduation).

Regarding sleep position, 79.4% of the babies slept supine and the remaining 20.6% slept in lateral or prone position. Almost 70% of the children slept in a child-sized bed, the remaining 30% in an adult bed. In all ages, more than 30% of the babies slept in the same bed together as their parents, with the highest percentage among children aged 2-6 months. In the lower category of age (0-2 months), as many children slept with the parents as those who slept in a bedside cradle (32% each).

Furthermore, 56% of the babies were breastfed; about 30% of the infants never used a pacifier while just over 20% used it during sleep. Approximately 66% of the children had the habit of used to finger sucking. 60% of the interviewed parents did not smoke.

Among the infants who came to visit at SIDS Centre, more than 80% slept supine already before or on the same visit; the remaining 20% went from a lateral or prone position to a supine one after the visit. 27% of the babies slept in the same bed as their parents: of these, only one case maintained this habit, while the others switched to the bedside cradle for co-sleeping after the visit.

Among those not visited, 87% already slept in supine position and maintained the trend in later ages. Instead, almost 35% of the infants slept in the same bed as their parents, and only 12% changed this habit.

Conclusions

In the interviewed sample, a good application of the recommendations for SIDS prevention was found as regards the supine position, the child-sized bed and breastfeeding.

The percentage of children under 6 months who slept in the same bed with their parents remains high, particularly in the category aged 2-6 months, namely the time lapse that includes the age at highest risk of SIDS.

0020 A

Title: Apparent Life-Threatening Events and Epilepsy: main predictive factors

Authors: A. Vigo, M. Farioli, G. Costagliola, S. Costa, S. Noce

Center for Pediatric Sleep Medicine and SIDS, Regina Margherita Children's Hospital, Turin City of Health and Science, Turin, Italy

Background: The acronym ALTE (Apparent Life-Threatening Event) refers to a group of unexpected events that occur suddenly in an infant and strongly alarm the witnesses. The episode resolves quickly and spontaneously in most cases, but its interpretation is complex: the clinician has to set up a differential diagnosis that may include physiological, paraphysiological phenomena and pathologies of important severity

Objectives:

To identify the predictive factors that allow an easier diagnosis of epilepsy in an infant who presented an episode of ALTE.

Methods

A retrospective study was conducted on infants less than 12 months of age evaluated for an ALTE at the Center for Pediatric Sleep Medicine and for SIDS in the Piedmont Region in the period 2009-2017. The quantitative variables were studied by the Mann-Whitney test, the qualitative ones by the Fisher test.

Results

926 patients were eligible. 12 out of 926 resulted to have epilepsy. The average age of non epileptic patients was 55 days, while epileptic patients presented an average age of 120 days. Familiarity with epilepsy and / or sudden death was statistically significant between the two samples (p value = 0.0102) and increased the patient's risk of being epileptic by 6.2 times. The longer duration of the event (p value = 0.0053) increased the risk by 6.8 times, the presence of clonias (p value = 0.0007) and stereotypes (p value = 0.0024) increased the risk respectively of 13.9 and 15.3 times. The presence of recurrences during hospitalization (p value = 0.0003) and during follow-up (p value = 0.0004) increased the risk by 31 and 65 times. There was no statistically significant difference between full-term and preterm-born patients.

Conclusions

The results suggest that a careful medical history may guide physicians towards the suspicion of an epileptic event in an ALTE episode. In particular, the attention should be focused on the patient's age, on the characteristics of the episode (duration, presence / absence of clonias and / or stereotypes), on possible recurrences and on familiarity for epilepsy and / or sudden death.

0021 A

Title: A dangerous "diagnosis of convenience": ALTE caused by gastroesophageal reflux

Authors: M. Farioli, A. Vigo, G. Costagliola, R. Fazio, S. Noce

Center for Pediatric Sleep Medicine and SIDS, Regina Margherita Children's Hospital, Turin City of Health and Science, Turin, Italy

Background: The acronym ALTE (Apparent Life-Threatening Event) refers to a group of unexpected events that occur suddenly in an infant and strongly alarm the witnesses. The episode resolves quickly and spontaneously in most cases, but its interpretation is complex: the clinician has to set up a differential diagnosis that may include physiological, paraphysiological phenomena and pathologies of important severity

Objectives

Make a correct and timely diagnosis.

Methods

Case Report

Results

D., 6 months old, is brought to Emergency Department (ED). Parents reported episodes of Apparent Life-Threatening Events (ALTE) characterized by hypotonia and hyporeactivity with doubtful loss of consciousness occurring for about a month mainly one hour after waking up. The events lasted about 40 seconds and were followed by complete well-being without clear sleep. The child had been visited two weeks before in the Neuropsychiatric clinic and had performed electroencephalogram (EEG) in sleep that had shown sporadic anomalies of dubious meaning. In the ED the child was in good general condition, afebrile, with normal vital signs, neurological examination and capillary blood gas analysis (CBG). D. was discharged with a cardiological evaluation and a follow-up EEG planned. The following day, after an episode with similar characteristics but longer than usual, D. was brought back to the ED and admitted for further investigations. During admission Electrocardiogram (ECG), EEG in sleep and echocardiogram, 4-channel cardiorespiratory monitoring for 24 hours were performed and resulted normal. The following week the follow-up EEG was free of asymmetries or clear irritative signs but indicated slow posterior activity with sharp morphology. On the occasion of a neurological visit, in consideration of the abundant and voracious feeding of the baby, gastroenterological investigations were suggested while keeping following-up the child in the neurological division. A radiography of the gastrointestinal tract with barium was performed; it showed complete gastroesophageal reflux (GER). pH-Impedance study was also performed and recorded only a critical episode, resulting overall negative for GER. However, esomeprazole was introduced. Meanwhile, the child kept presenting episodes of ALTE: in particular, one night he presented an episode of apparent loss of consciousness with bradycardia (<80 heartbeats per minute) during sleep. Magnetic resonance imaging of the brain and 24-hour-ECG Holter were therefore performed and both resulted negative. After about 20 days of hospitalization the child was brought to the Center for Sleep Medicine and SIDS; a possible epileptic nature of the events was hypothesized. In the meantime the episodes had become very frequent (even several times a day). A second 4-channel cardiorespiratory monitoring was performed as requested by the admitting division; it showed numerous bradycardias <80 bpm lasting> 5 seconds that had not been present in the previous trace, performed before starting esomeprazole therapy. It was therefore recommended to suspend drugs potentially active on cardiorespiratory activity; however esomeprazole therapy was continued. One month after admission to the ED the child presented three close episodes characterized by loss of contact, diffuse tremors in the limbs and bilateral palpebral and buccal clonias, together with sialorrhea and desaturation. The episodes resolved spontaneously after two minutes. The post-critical EEG showed inconstant slow-pointed activity in the right temporal area. A diagnosis of generalized epilepsy was made and therapy with Phenobarbital 5mg / kg / day was started. At the follow-up visit two months later no convulsive episodes or episodes of loss of contact were reported.

Conclusions

Gastroesophageal reflux, a phenomenon that is mostly paraphysiological in the first months of life, becomes too often a convenient label that is applied on non-clinically relevant events, even without

the instrumental confirmation. On the other hand, GER is often considered the underlying etiology of some episodes of ALTE, risking to delay the diagnosis and treatment of much more severe pathologies such as epilepsy. Lastly, starting empirical therapies for RGE may also expose the infants to potentially harmful side-effects, as in our case

0022 A

Title: Simple tool for assessing the quality of breastfeeding

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Background

The World Health Organization (WHO) has recommended exclusive breastfeeding since 2011 until the 6th month of life. In 2018 it published a new guide in 10 steps to support breastfeeding, in fact, breast milk is the only natural food that contains all the nutrients in the right proportions, is easily digested and contains a series of factors that protect against infections and help to prevent some diseases and allergies, therefore offers many advantages for the child in terms of health, growth and psychological development, and is strongly protective against SIDS by increasing arousability. On these premises the question we asked ourselves is whether mothers receive sufficient help in the first months after giving birth to breastfeed their baby.

Objectives

Help new mothers to deal with the healthcare professionals in charge

Methods

Use of a questionnaire distributed during visits or performance of instrumental examinations in the hospital unit of the OIRM

Results

We got a sample of 40 questionnaires

Conclusions

Greater attention and empathy can certainly improve and support mothers in the process of breastfeeding.

0023 A

Title: Unexpected neonatal death due to Persistent Pulmonary Hypertension: a retrospective analysis

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Background

Persistent pulmonary hypertension (PPHN) is a severe syndrome due to the lack of physiological decrease in pulmonary vascular resistance at birth. It is frequently found in pediatric hospitals, as it

often arises suddenly after birth in about 2% of preterm or full-term births. It represents an important cause of unexpected neonatal death (Sudden Unexpected Infant Death - SUID), with a mortality rate of 10-20% of affected patients. PPHN can be associated with structural or functional pathologies of the lung, not always identifiable in the prenatal period. It is manifested by sudden tachypnea, retraction, severe cyanosis, acidosis, rapid and worsening hypoxemia. The diagnosis of PPHN, in neonates with respiratory failure, is based on the finding of pulmonary and right atrium values alteration at echocardiography, in the absence of heart disease. The treatment consists of pharmacological and / or ventilatory support therapies, sometimes ineffective.

Objectives

To identify precise histological criteria of PPHN-associated diseases, to better understand their histopathogenesis, and contribute to a better clinical management of newborns with PPHN, reducing their mortality rate.

Methods

Retrospective analysis of neonatal autopsy data, performed from 2014 to 2018, archived in the Department of Pathological Anatomy of the Città della Scienza e della Salute di Torino, Turin, with subsequent revision to the optical microscope of the histological findings of lung tissue of each selected case, by the use of new histological and immunohistochemical stains.

Results

86 neonatal autopsies were analyzed. 18 out of 86 autopsies resulted with neonatal PPHN. PPHN was associated with: diaphragmatic hernia in 5 cases, congenital pulmonary hypertension in 5, alveolar-capillary dysplasia in 3, pneumonia in 2, bronchodysplasia in 2, inhalation of meconium in 1.

Conclusions

The research carried out shows that PPHN represents 20% of the causes of neonatal death and, in accordance with scientific literature, it recognizes a very heterogeneous histopathogenesis, associated with multiple structural or functional lung malformations. Some pathologies are almost always fatal (congenital pulmonary hypertension, alveolar-capillary dysplasia), despite immediate therapeutic assistance; others, on the other hand, are lethal only in the most severe forms (bronchodysplasia, diaphragmatic hernia, meconium inhalation, pneumonia).

0024 A

Title: The Computerized Micro Tomography As A New Diagnostic Tool in the Case of Cardiac Pathologies

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Background

The diagnostic process in case of stillbirth, sudden infant death syndrome (SIDS) and sudden unexpected death in infant (SUID) is a challenge. In such cases, the heart should always be carefully analyzed: the exclusion or confirmation of diseases affecting this organ is, in fact, a fundamental step in a correct diagnostic process. From time to time, the need to develop new diagnostic methods appears increasingly evident, in order to achieve a more accurate identification of cardiac pathological

processes. Recently the use of the computerized tomography (micro-CT) for the detailed analysis of fetal hearts has been proposed in the literature.

Objectives

The study aims to develop a reliable and reproducible method for the study of fetal hearts by micro-CT.

Methods

12 fetal hearts were selected. 5 out of 12 were treated with 5% formalin and subsequently with lugol. 3 were treated by injection of a polymerizing radiopaque substance (Microfil) into the coronary circulation via the aortic route after 5% formalin fixation. 4 were treated with EDTA fresh injection and polymerizing radiopaque substance (Microfil); subsequently they were fixed in formalin. Following these operations all the hearts were scanned by micro-TC. The data obtained were analyzed using the CTvox® and DataViewer® software for reconstruction in two and three sample sizes.

Results

The use of lugol as a radiopaque medium has allowed an impregnation of heart chambers and large vessels. The use of Microfil on hearts already fixed has determined the partial possibility of highlighting the coronary tree of the hearts examined. The use of EDTA and pre-fixation polymerising substance has allowed the possibility to highlight the cardiac vascular tree.

Conclusions

The study shows that the use of micro-CT in the examination of fetal hearts is certainly possible. In particular, the use of lugol allows a clear highlighting of the cardiac chambers and the vascular peduncle; the use of EDTA and polymerizing substance has allowed an accurate analysis of the cardiac coronary tree. Ultimately it is possible to conclude that micro-CT is a reliable and reproducible tool in the study of fetal hearts. In addition, the computerized analysis of the data makes it possible to hypothesize that this method will also allow the printing of 3D models of the hearts being studied, usable for diagnostic and didactic purposes.

0025 A

Title: SIDS / SUID PREVENTION: the role of health workers to educate parents about the rules that make their baby's sleep safer.

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Background

The Division of Pediatrics of Chieri Hospital is the reference of the local health services (ASL TO 5) for the diagnostic classification and the counseling related to the episodes of Apparent Life-Threatening Events (ALTE) and it was the first Hospital connected with telemedicine with the Center for Pediatric Sleep Medicine and for the SIDS in Regina Margherita Children Hospital in Turin (OIRM). For the management of infants with ALTE we refer to the document of the regional work group - Piedmont / Valle d'Aosta processed in 2015 which includes an algorithm aimed at guiding and supporting the clinical-diagnostic behavior of hospital and territorial pediatricians.

Objectives

During the observation period of the infant admitted in the Chieri Pediatric Division, a fundamental goal of health workers is to educate parents about prevention.

Methods

For this reason, an informational and educational booklet has been studied and developed ; the booklet is explained and delivered to parents during an organized meeting.

Results

This booklet focused on which behaviours should be avoided in a possible critical event (“what NOT to do”) in order to reassure and not to frighten the parents, rather than highlighting which manouvers have to be performed. The “golden rules” for a safe sleep are also listed and explained. (first page is attached)

Conclusions

In our experience, the parents of infants who presented an episode of ALTE potentially dangerous for their life are very eager to receive the right information on how to behave on the occasion of a possible new episode and above all how to prevent it. Written information with a simply and clearly written booklet and a reassuring interview are certainly the most effective methods to adopt.

0027 A

Title: Good practices in case of infant death in the emergency room

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Background

The Sudden Infant Death Syndrome (SIDS) is the main cause of death in the first year of life in the industrialized countries excluding the neonatal period, and is responsible for 20% of deaths in pediatric emergency departments. In Piedmont, the estimate provided by the regional reference center is 0.09 episodes out of 1000 live births (2004-2015 data).

Objectives

Given the medical and psychological importance of this event and its multidisciplinary impact, both parents’ associations and a Regional Network for the monitoring and the epidemiological surveillance of sudden deaths 0-2 years were born. In most cases these little patients are brought to the emergency room while resuscitation maneuvers, started at home by emergency services’, are still in progress.

Methods

A regional protocol was drawn up to facilitate the clinical care pathway of SIDS events and to support the activity of the health personnel who first face this tragic event in the out of the hospital context ,such as to give assistance to the Emergency Department and the Intra-hospital Emergency Unit where the small patient is admitted. The protocol, developed by the SIDS Center in collaboration with the Departments of Hygiene and Public Health (SISP), produce an accurate representation of the event and state of health of the small patient through a punctual data collection. It does so by anamnesis collection, interviewing both the parents and the attending physician, and by a precise description of the autoptic examination, in order to exclude all other etiologies before identifying the death of an infant as an unexpected and sudden death.

Results

This protocol is in use in the emergency room of the Regina Margherita Children hospital in Turin. Most often the out of the hospital emergency team brings the patient to the emergency room, but

sometimes patients are brought there by their caregivers; in 66% cases cardio pulmonary resuscitation is started by the care giver. There is considerable agitation when the emergency room staff prepares to face a situation of cardio-circulatory arrest in a child. After the identification of the team leader and the division of roles, resuscitation starts according to the Pediatric Advanced Life Support (PALS) protocols and can involve other specialists present in the presidium (cardiologist, anesthesiologists) depending on the specific situation. In the event that resuscitation is ineffective, death is ascertained. If it is an infant, in addition to the investigations required by the Italian law for the declaration of death, we also proceed with the execution of a total-body radiograph together with the collection of blood, urine and hair samples as required by the regional protocol . Following the latest studies concerning the presence of the parent during resuscitation, it is proposed to the parent to stay close to their child during all these moments. It is important to activate as soon as possible the staff of the SIDS Center and the representatives of the regional network for the surveillance of sudden deaths, as an early contact between an expert and the family is desirable, as well as the possibility of performing an autopsy on the body.

Conclusion

In order to be able to avoid, contain, or identify further risk factors for SIDS in the future, it is important that every step, from the reconstruction of the moment of well-being of the newborn to the autopsy examination, is performed with scrupulous attention.

0030 A

Title: Investigation of Sleep Environments in Japanese Healthy Infants

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Background

To reduce the incidence of SUID (Sudden Unexpected Infant Death), supine sleep position, avoiding soft bedding, keeping soft objects and stuffed toys out of the baby bed, room sharing, prohibition of smoking, alcohol, or drug during pregnancy and after delivery, breast feeding, and using pacifier are recommended in many countries.

Objectives

The purpose of this study is to investigate the sleep environments of Japanese healthy infants in order to adapt the recommendations given to new parents about sudden infant death risks taking into account the different cultural settings.

Methods

Questionnaire on infant sleep environment was carried out between November 2017 and March 2018 for the mothers with the babies from 7 months up to 18 months old who visited pediatric units of three hospitals in Japan. The questionnaire includes type of feeding, type of beddings, room sharing, use of pacifier, brightness of the baby's sleeping room, co-sleeping at the age of 1-2months, 3-6 months, after 7months old. The questionnaire is anonymous and participation to the study is voluntary. The study protocol was approved by the ethical committee in each hospital.

Results

Totally 318 responses for the questionnaire were analyzed. A half of the babies was breast-feeding and one third was bottle-feeding. Almost two third of the babies sleep in the same room with parents,

one third sleep in the same room only with mother. No baby sleeps in the independent room. At the age of 1-2 months, approximately, 55% of the babies sleep in the baby bedding, 45% was in the adult bedding. At the age of 3-6 months old, approximately, 45% of the babies sleep in baby bedding and 45% in adult bedding. After 7 months old, one third was in baby bedding and two third was in adult bedding. The rate of co-sleeping was less than 30% at the age of 1-2 months, and increased according to baby's age, up to almost 55%. Pacifier use was not common in Japan.

Conclusions

In Japan, the ratio of co-sleeping tended to increase according to the baby's age. These results seemed that most of parents take care of their babies thinking about the physical development of the baby. The reason why pacifier was not used commonly is that pacifier use considered to disturb breast-feeding or to cause the alignment of the teeth.

0031 A

Title: Back to sleep - Prevention communication campaign in Eastern Piedmont

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The message to parents of newborns about primary prevention of SIDS starts already during pregnancy in birth accompanying courses. This message is reiterated during the Nursing and discharge hospitalization. In collaboration with the Rotary Club of Valsesia, Vallemosso, Biella, Borgomanero-Arona, Pallanza-Stresa, Novara and Vercelli, a t-shirt was produced with the words "I sleep on the back", which was given to all those born (around 6,000 in 2018) at the hospitals of Vercelli, Borgosesia, Biella, Novara, Borgomanero, Verbania and Domodossola.

