

## Research Media Watch:

# Incidence and determinants of sudden infant death syndrome: a population-based study on 37 million births

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Sudden infant death syndrome (SIDS) is one of the leading causes of death in the first year of life in newborns and infants. This study was large population-based study aimed 1) to describe the incidence of SIDS in the US and measure the trend over the last decade, 2) to profile the timing of SIDS occurrence during the course of the year following birth, and 3) to examine the baseline and clinical factors associated with SIDS as potential risk factors.

Study carried out a population-based cohort study on 37 418 280 births using data from the Centres for Disease Control and Prevention's "Linked Birth-Infant Death" and "Fetal Death" data files from 1995 to 2004. Descriptive statistics and cox-proportional hazard models were used to estimate the adjusted effect of maternal and newborn characteristics on the risk of SIDS.

There were 24 101 cases of SIDS identified for an overall 10-year incidence of 6.4 cases per 10 000 births. Over the study period, the incidence decreased from 8.1 to 5.6 per 10 000 and appeared to be most common among infants aged 2-4 months. Risk factors included maternal age <20 years, black, non-Hispanic race, smoking, increasing parity, inadequate prenatal care, prematurity and growth restriction.

So Conclusionsis while the incidence of SIDS in the US has declined, it currently remains the leading cause of postneonatal mortality, highlighting an important public health priority. Educational campaigns should be targeted towards mothers at increased risk in order to raise their awareness of modifiable risk factors for SIDS such as maternal smoking and inadequate prenatal care.

**Source :** World J Pediatrics 2015;11(1):41-47

## Comments :

Health educations to all pregnant women during antenatal and postnatal is must leading to reductions in modifiable risk factors for SIDS such as Reducing maternal smoking, discouraging infant bed sharing and prone sleep placement practices.

Parental presence on neonatal intensive care unit clinical bedside rounds: randomised trial and focus group discussion.

There are limited data to inform the choice between parental presence at clinical bedside rounds (PPCBR) and non-PPCBR in neonatal intensive care units (NICUs). Study performed a single-centre, survey-based, crossed-over randomised trial involving parents of all infants who were admitted to NICU and anticipated to stay >11 days. Parents were randomly assigned using a computer-generated stratified block randomization protocol to start with PPCBR or non-PPCBR and then crossed over to the other arm after a wash-out period.

At the conclusion of each arm, parents completed the 'NICU Parental Stressor Scale' (a validated tool) and a satisfaction survey. After completion of the trial, and surveyed all healthcare providers who participated at least in one PPCBR rounding episode. Study also offered all participating parents and healthcare providers the opportunity to partake in a focus group discussion regarding PPCBR.

A total of 72 parents were enrolled in the study, with 63 parents (87%) partially or fully completing the trial. Of the parents who completed the trial, 95% agreed that parents should be allowed to attend clinical bedside rounds. A total of 39 healthcare providers' surveys were returned and 35

(90%) agreed that parents should be allowed to attend rounds. Nine healthcare providers and 8 parents participated in an interview or focus group, augmenting our understanding of the ways in which PPCBR was beneficial.

Parents and healthcare providers strongly support PPCBR. NICUs should develop policies allowing PPCBR while mitigating the downsides and concerns of parents and healthcare providers such as decreased education opportunity and confidentiality concerns.

**Source :** Arch Dis Child Fetal Neonatal Ed 2015;100:F203-F209

**Comments :**

Parental presence at clinical bedside rounds (PPCBR) is good concept in reducing doubts of parents and to give clear information about neonate, but need further more studies with large data to support this.

Risk factors for bronchiolitis hospitalization during the first year of life in a multicenter Italian birth cohort.

Respiratory Syncytial Virus (RSV) is one of the main causes of respiratory infections during the first year of life. Very premature infants may contract more severe diseases and 'late preterm infants' may also be more susceptible to the infection. This study was conducted to evaluate the risk factors for hospitalization during the first year of life in children born at different gestational ages in Italy.

This was a multicenter cohort study including consecutive newborns born between 2009 and 2012. All subjects were enrolled at birth and followed up for the first year of life. Thirty Neonatology Units from hospitals with 1000 or more deliveries per year located in the northern, central, southern and insular regions of Italy participated in this study .For each enrolled newborn of 33-34 wGA, two further newborns of the same sex and with the nearest date of birth were enrolled: one of 35-37 wGA and one of >37 wGA. Exclusion criteria were life expectancy shorter than six months; haemodynamically significant

congenital heart diseases and chronic lung diseases , this study for a three-year period (2009-2012) of hospitalization for bronchiolitis (ICD-9 code 466.1) during the first year of life was assessed through phone interview at the end of the RSV season (November-March) and at the completion of the first year of life.

The study enrolled 2314 newborns, of which 2210 (95.5 %) had a one year follow-up and were included in the analysis; 120 (5.4 %) were hospitalized during the first year of life for bronchiolitis. Children born at 33-34 wGA had a higher hospitalization rate compared to the two other groups. The multivariate analysis carried out on the entire population associated the following factors with higher rates for bronchiolitis hospitalization: male gender; prenatal treatment with corticosteroids; prenatal exposure to maternal smoking; singleton delivery; respiratory diseases in neonatal period; surfactant therapy; lack of breastfeeding; siblings <10 years old; living in crowded conditions and/or in unhealthy households and early exposure to the epidemic RSV season. When analysis was restricted to preterms born at 33-34 wGA the following variables were associated to higher rates of bronchiolitis hospitalization: male gender, prenatal exposure to maternal smoking, neonatal surfactant therapy, having siblings <10 years old, living in crowded conditions and being exposed to epidemic season during the first three months of life.

So study identified some prenatal, perinatal and postnatal conditions proving to be relevant and independent risk factors for hospitalization for bronchiolitis during the first year of life. The combination of these factors may lead to consider palivizumab prophylaxis in Italy.

**Source:** Italian Journal of Pediatrics (2015) 41:40

**Comments :**

Analysis of local epidemiological data and risk factors involved in RSV-related hospitalization is mandatory in order to better plan preventive strategy and to develop updated national guidelines tailored for pediatric high-risk populations.

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Adapted from: 1. Nelson Textbook of Pediatrics, 19th Edition, chapter 315. 2. Pediatrics 2013;131;E1686 3. Pediatr Gastroenterol Hepatol Nutr 2012;15:220-228



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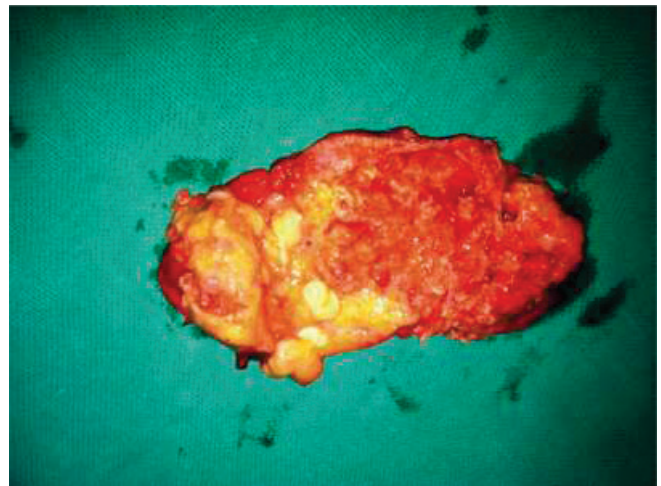
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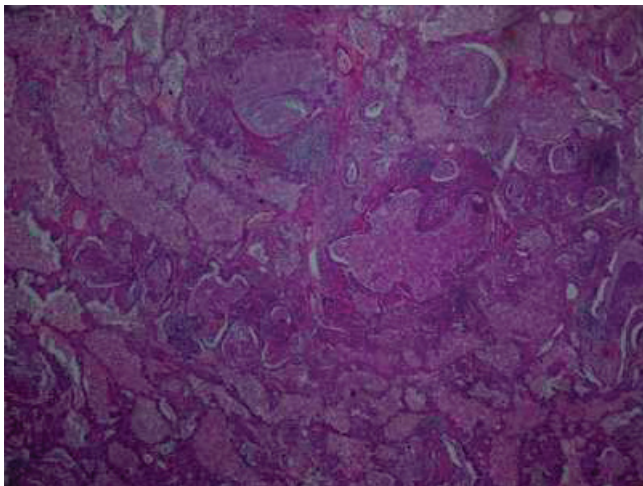




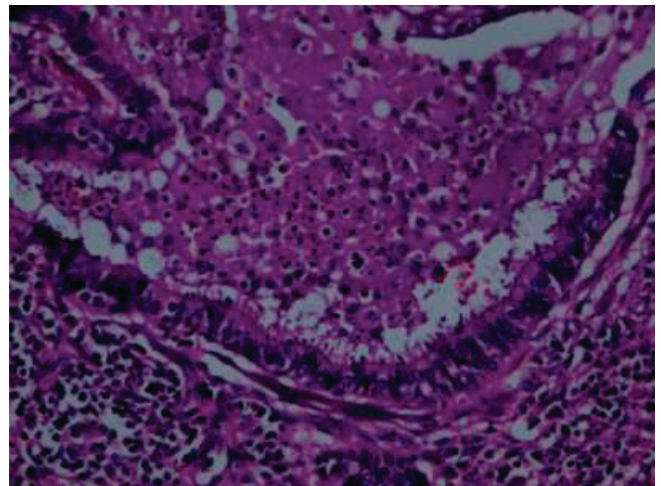
**Items required to conduct the DDST  
( Page No. 241 )**



**X-ray chest PA showing opacity on left upper and middle lobes and mediastinal shift toward right..  
( Page No. 265 )**



**Histological picture showing small cysts and solid air less tissue in a disorganized manner (hematoxylin and eosin, 40×) ( Page No. 265 )**



**The larger view of a single cyst lined by stratified ciliated columnar bronchial type of epithelium and cyst fluid with inflammatory cells (hematoxylin and eosin, 400×) ( Page No. 265 )**



**Arachnodactyly  
( Page No. 268 )**



**Steinberg Sign  
( Page No. 268 )**



**Pectus Excavatum  
( Page No. 268 )**



**High Arched Palate  
( Page No. 268 )**