

PEDIATRICS

Choking injuries and food products containing inedibles: a survey on mothers' perception in the United Kingdom

Sondaggio sulla percezione delle madri inglesi riguardo agli incidenti da inalazione e i cibi contenenti giocattoli

R. TESTA, B. MORRA¹, D. CONNAL², D. LINGUA³, G.C. PASSALI⁴, D. PASSALI⁵

Safety of Toys Department, Soremartec Italia S.r.l., Alba, Italy; ¹ ENT Department, San Giovanni Battista "Molinette" Hospital, Turin, Italy; ² Legal Office, Ferrero UK Ltd, Watford, UK; ³ Legal Affairs, Soremartec Belgium SA, Heinsch, Belgium; ⁴ ENT Department, Catholic University "The Sacred Heart" of Rome, Italy; ⁵ ENT Department, University of Siena, Italy

ABSTRACT

Although recent investigations showed no specific hazard resulting from Food Products Containing Inedibles as compared to the wider category of toys, in view of recent findings and subsequent study of the European Registry of Foreign Bodies Injuries, a potential threat has been identified in a lack of parental supervision in the event of injury. Indeed, according to the report of the European Registry of Foreign Bodies Injuries, almost 80% of the injuries occur under parental supervision, which is obviously inadequate. The aim of this short contribution is to present the results of a Computer Assisted Personal Interviewing survey in the UK focused on the knowledge that mothers, fathers and other adults have on the issue of choking. A total of 1946 interviews have been conducted in the UK, in January 2001, all of which directed to subjects over 15 years of age. Data are presented as percentages and absolute numbers. The statistical significance of group differences has been evaluated with the chi-square test with continuity correction. All analyses have been performed using the R system. Those replying to the interview comprised 804 males and 1102 females. Of these, 10% had a child between 0 and 36 months, 9% between 3 and 4 years, 16% between 5-10 years and 13% between 11-15 years. Of those responding, 7% had bought Kinder Surprise within the last two weeks before the interview, 14% within the last three months, and the remaining 53% before, while 26% had never bought Kinder Surprise. These findings would appear to offer a confirmation that mothers tend to balance potential risks with the benefits of exposing the child to a stimulating activity. This mechanism of a controlled exposure to risk, has already been identified as one of the important mechanisms in the psychological development of the child.

KEY WORDS: Children • Food products containing inedibles • Choking • Foreign bodies

RIASSUNTO

Benché le recenti indagini non hanno evidenziato alcun rischio specifico associato ai prodotti alimentari contenenti sostanze non commestibili (FPCI) rispetto ad una più ampia categoria di giocattoli, alla luce dei recenti risultati del Registro Europeo delle Lesioni da corpi estranei (European Registry of Foreign Bodies Injuries – ESFBI), una potenziale minaccia è stata identificata in una mancanza di controllo da parte dei genitori nel momento in cui si verifica l'inalazione. Infatti, secondo la relazione dell'ESFBI, quasi 80% delle lesioni sono avvenute sotto controllo dei genitori, che, di conseguenza è risultato inadeguato. L'obiettivo di questo breve studio è di presentare i risultati, ottenuti mediante CAPI (Computer Assisted Personal Interviewing), di un'indagine, condotta nel Regno Unito, riguardo la conoscenza che madri, padri e altri adulti hanno riguardo al rischio di soffocamento infantile. Un totale di 1946 interviste sono state eseguite mediante il sistema CAPI nel Regno Unito nel gennaio 2001 arruolando soggetti di età superiore a quindici anni. I dati sono presentati in percentuale e come numeri assoluti. La significatività statistica delle differenze è stata valutata con test del chi-quadro. Tutte le analisi sono state effettuate tramite il R system. I soggetti intervistati sono stati 804 maschi e 1102 femmine. Il 10% aveva un bambino tra 0 e 36 mesi, il 9% tra 3 e 4 anni, il 16% tra 5 e 10 anni ed il 13% tra 11 e 15 anni. Il 7% degli intervistati aveva acquistato Kinder Sorpresa entro le ultime due settimane dall'intervista, 14% entro gli ultimi tre mesi, e il restante 53% da tempo superiore ai tre mesi. Infine il 26% degli intervistati non aveva mai acquistato Kinder Sorpresa. Ciò che sembra derivare da questi risultati è la conferma che le madri tendono a bilanciare i potenziali rischi con i vantaggi di esporre il bambino ad un'attività stimolante. Questo meccanismo di controllata esposizione al rischio, è stato già identificato come uno dei più importanti meccanismi per lo sviluppo psicologico del bambino.

PAROLE CHIAVE: Età pediatrica • Prodotti alimentari contenenti sostanze non commestibili • Soffocamento • Corpi estranei

Introduction

The issue of Food Products Containing Inedibles (FPCI) and the risk they give rise to in terms of choking in children has been widely discussed in the otorhinolaryngological, and in the injury prevention, communities¹². This is part of the more general discussion regarding foreign body injury (FBI) prevention and treatment or removal³⁻⁹. Although recent investigations¹⁰ showed no specific hazard related to FPCI as compared to the wider category of toys, in view of recent findings of the European Registry of Foreign Bodies Injuries (ESFBI – www.susysafe.org)¹¹ and of the ESFBI study¹², a potential threat has been identified in a lack of parental supervision in the circumstances of the injury. Indeed, according to the ESFBI report, almost 80% of the injuries occur under parental supervision, which, obviously is inadequate. The aim of this short contribution is to present the results of a Computer Assisted Personal Interviewing (CAPI) survey in the UK focused on the knowledge that mothers, fathers and other adults have on the issue of choking and, in particular, on the attention and on the understanding of warnings associated with the FPCI case.

Material and methods

A total of 1946 interviews were made using a CAPI facility in the UK in January 2001. Interviewed were subjects > 15 years of age.

The sampling design was a three-stage design, sampling first parliamentary constituencies in the UK within those selected constituencies and, finally, respondents within the enumeration districts. The 641 parliamentary constituencies of Great Britain are classified in the Register General's ten Standard Regions.

Mothers and relatives were asked about their experience with FPCIs (Kinder Surprise and others) and their consumption habits as far as concerns these products. Then, their opinion about warning ("adult supervision recommended") effectiveness and actual need ("Children should not be left alone when playing with small toys", "Everyday small items, such as staples and coins, should be kept out of reach"), the role of Kinder Surprise (KS) in developing manual and intellectual skills ("KS tends to stimulate the child", "I enjoy playing with the KS toy and the children").

Data are presented as percentages and absolute numbers. The statistical significance of group differences has been evaluated with the chi-square test with continuity correction. All analyses have been performed using the R system.

Results

Of the subjects interviewed, those responding (respondents) comprised 804 males and 1102 females. Ten percent had a child between 0-36 months, 9% between 3-4 years, 16% between 5-10 years and 13% between 11-15 years.

Of the respondents, 7% had bought KS within the last two weeks prior to the interview, 14% within the last three months, and the remaining 53% more time ago, while 26% had never bought KS.

Regarding the question "What is the minimum safe age that KS should be given to children", which aimed at investigating the knowledge regarding the warning, only 6% of the sample answered that they would have, wrongly, distributed small part toys to children under 3 years old. When asked if "Children should not be left alone when playing with models or toys with small pieces", 82% of the respondents agreed with this. This percentage increases to 86% when the respondent already had children in the age range 0-2 years.

In addition, 93% of the respondents indicated, as a potential threat, leaving children exposed to small part objects of everyday life (like staples or coins), and thus agreed with keeping these children away from such items. More than 40% of the respondents agreed that KS is stimulating the children's skills and imagination. Fifty percent of the respondents enjoy playing with the child in assembling the KS.

Discussion

Small part objects still represent a major threat for the health of children^{13 14} and also a major public health issue⁷. Nevertheless, several improvements have been made as far as concerns early diagnosis, treatment and removal techniques^{12 15}, thus reducing the impact of such injuries. Parents' understanding of the risks of small-part objects emerges as quite high in the current investigation, and educational initiatives need to be provided only for the small set of people (between 10% and 20% of the interviewed population), unaware of the potential risks. Clearly, a major limitation of this study is that it does not compare awareness with actual occurrence of the injuries, thus leaving to the Authors' speculation the understanding of such, if any, relationship.

The fact that mothers and other relatives now recognize the positive impact that playing with KS has on their children's development, in terms of manual skills and stimulus to the imagination, emerges from the current investigation and is in line with other studies, carried out in experimental settings¹⁰. Moreover, the effect of warnings on toys with respect to the increasing knowledge on the theme, and, subsequently, the potential reduction in the incidence of injuries due to everyday life might not be negligible, but still needs further investigations for being quantified.

What seems to be derived is a confirmation that mothers tend to balance potential risks with the benefits of exposing the child to a stimulating activity. This mechanism of controlled exposure to risk, has already been identified as one of the important mechanisms in the psychological development of the child¹⁶.

References

- ¹ Benelli B, Donati C, Consonni N. *Food products containing inedibles: children recognition of their "double nature" and manipulation-play behaviour*. International Congress Series 2003;1254:497-500.
- ² Morra B. *Foreign Bodies Injuries in Children: a Roundtable*. In: *5th European Congress of Oto-Rhino-Laryngology Head and Neck Surgery*. Rhodos/Kos, Greece 2004.
- ³ Gregori D, Salerni L, Scarinzi C, et al. *Foreign bodies in the ears causing complications and requiring hospitalization in children 0-14 age: Results from the ESFBI study*. *Auris Nasus Larynx* 2009;36:7-14.
- ⁴ Gregori D, Salerni L, Scarinzi C, et al. *Foreign bodies in the upper airways: the experience of two Italian hospitals*. *J Prev Med Hyg* 2007;48:24-6.
- ⁵ Gregori D, Salerni L, Scarinzi C, et al. *Foreign bodies in the nose causing complications and requiring hospitalization in children 0-14 years age: results from the European survey of foreign bodies injuries study*. *Rhinology* 2008;46:28-33.
- ⁶ Gregori D, Salerni L, Scarinzi C, et al. *Foreign bodies in the upper airways causing complications and requiring hospitalization in children aged 0-14 years: results from the ESFBI study*. *Eur Arch Otorhinolaryngol* 2008;265:971-8.
- ⁷ Gregori D, Salerni L, Scarinzi C, et al. *The cost of foreign body injuries in the upper aero-digestive tract: need for a change from a clinical to a public health perspective?* *Int J Pediatr Otorhinolaryngol* 2007;71:1391-8.
- ⁸ Rothmann BF, Boeckman CR. *Foreign bodies in the larynx and tracheobronchial tree in children. A review of 225 cases*. *Ann Otol Rhinol Laryngol* 1980;89:434-6.
- ⁹ Wolach B. *Aspirated foreign bodies in the respiratory tract of children: eleven years experience with 127 patients*. *Int J Pediatr Otorhinolaryngol* 1994;30:1-10.
- ¹⁰ Donati C, Benelli B, Consonni N, et al. *Are FPCIs a source of increased risk for children? Results of a multicenter, experimental study comparing children's behaviour with FP-CIs and toys*. *J Safety Res* 2007;38:589-96.
- ¹¹ Gregori D. *The Susy Safe Project. A web-based registry of foreign bodies injuries in children*. *Int J Pediatr Otorhinolaryngol* 2006;70:1663-4.
- ¹² Gregori D, Morra B, Snidero S, et al., editors. *The ESFBI Study. Final Report*. Milano: Franco Angeli 2005.
- ¹³ Brenner RA, Overpeck MD, Trumble AC, et al. *Deaths attributable to injuries in infants, United States, 1983-1991*. *Pediatrics* 1999;103:968-74.
- ¹⁴ Cummings P. *Cause of death in an emergency department*. *Am J Emerg Med* 1990;8:379-84.
- ¹⁵ Banerjee A, Rao KS, Khanna SK, et al. *Laryngo-tracheo-bronchial foreign bodies in children*. *J Laryngol Otol* 1988;102:1029-32.
- ¹⁶ Zigon G, Corradetti R, Morra B, et al. *Psychological aspects of risk appraisal in asphyxiation accidents: a review of the factors influencing children's perception and behaviour*. *Acta Otorhinolaryngol Ital* 2005;25:100-6.

Received: October 20, 2009 – Accepted: December 2, 2009