room as an adult (but not the same bed) have a lower risk of SIDS [8]. Almost all the infants in the Chinese mainland samples, and 93% of the Japanese and 83% of the Hong Kong sample had one or more adults in the room with the infant. These rates were generally higher than those in the other centres although there was considerable variation. Bedsharing was also common practice in these samples with 88% of the Chongqing infants sharing a bed (in most cases this was with both parents). Approximately one third of the Hong Kong and Japanese sample bedshared, and in most cases this was with the mother only. Information on pillow use, which was common in all four samples, is also shown in the table. Pillows were least popular in the Japanese sample (56%) and most popular in the two Chinese mainland samples (95%). Details of the materials used to make the pillows were sought but the details on the exact size and shape of pillows were not obtained (with the exception of the Japanese sample where additional details were collected as shown in Table 3).

Table 4 shows information on breastfeeding and pacifier use and emphasises the low rate of breastfeeding in the Hong Kong population and the high rate in the Japanese sample. Only 12% of the Chinese Hong Kong infants were receiving any breast milk at three months of age, compared to 79% of the Japanese infants and 77% of the Beijing infants. Of those infants not receiving breast milk at three months of age, only 31% of the Hong Kong infants had ever received any breast milk, compared to 100% of the Japanese infants. Pacifiers were most commonly used in the Hong Kong sample although most respondents noted that they were only used for a short time.

D. DISCUSSION

This report presents data on established SIDS risk factors (infant sleep position and parental smoking) as well as some more debatable SIDS risk factors (not room sharing, sharing a bed with the baby, use of a pillow, not breastfeeding and not using a pacifier) in samples from four Asian populations. Most studies on SIDS risk factors have been undertaken in western countries where rates of SIDS have been high, especially during the 1980s. These previous studies identified prone (front) infant sleep position as the most important modifiable risk factor for SIDS, and following public health campaigns to advise parents not to sleep infants prone, the rates of SIDS have fallen significantly in these countries. The four samples reported here are from countries were rates of SIDS have been lower than those in western countries such as New Zealand, Australia, United Kingdom, Norway, United States. A one-year study undertaken in 1987 highlighted a particularly low rate of SIDS in Hong Kong [6]. Likewise Japan has had a low rate of SIDS compared to western countries but during the 1980s increases in SIDS rates were observed [9]. These increases may have been genuine and related to an increased use of the prone sleep position for infants, or they may have been artefactual and related to diagnostic transfer.

Placing a baby to sleep in the supine position had been the traditional child care practice in Japan and even before results of SIDS risk factor research were known, the prone position was considered by many mothers to be dangerous. However because of influence from Western countries, some Japanese parents started to sleep their babies prone. Data for this present study was collected at a time when there may have been some awareness of the risks of prone sleep position in Japan as local campaigns to teach about risk factors were launched in mid 1996. The low rate of prone sleeping identified in the Japanese sample in this study (6%) may reflect a combination of this advice and traditional practices. In contrast the Hong Kong data were collected before any specific advice was available to parents about SIDS risk factors. The data from the two Chinese mainland samples (Beijing and Chongqing) were collected in populations where there was little awareness of SIDS as a problem and no advice was routinely available to parents on SIDS risk factors. These centres also had low rates of prone sleeping

suggesting that traditional practices were the main factors influencing sleep position.

The other consistent and important risk factor for SIDS identified in many studies has been smoking, particularly antenatal smoking by the mother [10]. However although it has been relatively easy to persuade parents not to sleep their infants prone, it has been much more difficult to persuade them not to smoke. In the western countries the rates of maternal and paternal smoking tended to be more similar, whereas in these four Asian samples smoking is predominantly a male behaviour. A 1997 study carried out by the Japanese Ministry of Health and Welfare showed that the rate of smoking amongst fathers in a control group was actually higher than for those fathers in a SIDS group.[11] It is speculated that father's smoking in Japan may not have a great effect on the baby's environment because full-time employment rate for Japanese fathers in this survey was 90%, and the average salary man works until fairly late in the evening making the time spent at home limited. Also, since houses in Japan are small, fathers often smoke out on the balcony when at home. However even if these assumptions are correct, the many other negative effects of smoking should make these high rates of smoking in fathers in Japan and Chinese mainland a public health concern.

Relatively high percentages in Hong Kong infants were cared for people other than the mother or father during both the day and night. This may reflect the fact that a significant number of mothers work outside the home during the day. However it may also be the result of the phenomenon of separated families in Hong Kong i.e. father, grandparents and child live in Chinese Hong Kong and mother lives in Chinese mainland due to immigration restrictions. However the infants in the Chongqing sample were also frequently cared for by people other than the parents. In both the Hong Kong and the Chongqing samples about one fifth of infants were also cared for by people other than the parents during the night, and grandparents were the most frequent alternative caregiver.

The majority of infants in these Asian samples had one or more adults sleeping in the room with them. This appears to be different to western culture where parents appear to place value on infants becoming independent [12] and where infants often sleep separately in rooms by themselves. These high rates of room sharing may be a factor that could help to explain low rates of SIDS in these Asian populations. Sleeping in the same room allows parents to check frequently on the baby at night. For example, in the Japanese sample 91% of parents checked their infants after than had gone to bed an average of 2.3 times per night. For accidents as well as SIDS, having an adult in the same sleeping room would create a safer environment for baby. If the baby were to struggle because bedclothes cover the head, if the baby were to become wedged in an unsafe position, if the baby were to turn over to the prone position or if the baby were to become too hot and sweaty, then there is a greater chance that a parent would identify these problems if they are in close proximity to the baby.

In New Zealand bedsharing was identified as a risk factor for SIDS when the mother was also a smoker [1]. The mechanism by which bedsharing and smoking interact to increase the risk of SIDS is not known. However if it is assumed that this interaction is in some way causal, it might be assumed that high rates bedsharing in these Asian samples do not increase the risk of SIDS because relatively few mothers smoke. It is also likely that the exact method of bedsharing may differ significantly between these different cultures and it may be speculated that high rates of bedsharing in populations with apparent low rates of SIDS might indicate significant differences in the methods of bedsharing. For example, the traditional bedsharing environment in Japan differs significantly from some western countries and this might be speculated to provide a low SIDS risk environment. Our study showed that 46% of babies slept on a futon in Japan. Futons are relatively firm, free-floating mattresses

made of cotton (only 6% rated sleeping area as soft of very soft). Futons might be safer than adult beds or baby beds that include frames made of steel or wood where wedging or hanging accidents might occur. The sleep environment was relatively cool as 44% of participants turned heaters off completely at night despite average temperatures of below 5°C and less than 10% of respondents heated the bed in some way. Almost all (97%) mattresses and futons were covered in cotton cloth and less than 10% of infants were put to bed wearing bonnets, mittens or socks. Pillows were small and firm (see below) and most infants were not wrapped (<6%). This sleeping environment, combined with low rates of smoking by Japanese mothers (9%) and high rates of supine sleeping of infants (89%), might result in bedsharing conferring more benefit (e.g. promotion of breastfeeding) than harm (increase SIDS risk). In both the Hong Kong and Japanese samples, the predominant bedsharing arrangement appeared to be the mother and baby only, whereas in the two Chinese mainland samples it was more common for both parents to share the bed with the infant. Using diagrams, data were sought on the position of the infant in relation to the bedsharing adult(s). This suggested that in less than a quarter of cases the infant was placed between two people.

It has been noted in Hong Kong and Japan, that small circular doughnut pillows are commonly used [5]. Folded towels or cloths may also be used as pillows. The data presented in Table 3 indicates that the majority of infants in these four samples used pillows. However in some of the western samples, where SIDS has been associated with pillow use, the majority of infants did not use pillows. This apparent paradox of frequent use of pillows in countries with low SIDS rates, might be explained by differences in the types of pillows used i.e. it might be speculated that the types of pillows used for infants in these four populations are not dangerous. In one study where pillows were implicated with SIDS, the types of pillows were very different large adult V-shaped pillows [13]. It is likely that placing an infant on top of a large soft adult pillow, will result in a very different level of risk to that of placing an infant's head onto a small firm pillow. No definite conclusions can be drawn from this data, but it would seem reasonable not to attempt to change the status quo i.e. advice against the use of pillows should not be given in these populations unless evidence of harm can be demonstrated.

In all samples, except Hong Kong, rates of breastfeeding were fairly high. In Japan, predominantly breastfed infants (47%) plus partially breastfed infants added up to 81%, leaving only 19% of infants being fed with formula only. Breastfeeding is facilitated in Japan where infants often sleep with mother and where mothers often stay home to be caretaker (96%) instead of returning to work. Pacifiers have been shown in four different studies to protect against SIDS [14]. The first study reporting this effect was from New Zealand [15] and subsequently similar results were reported from the Netherlands and Norway. Pacifiers were not particularly popular in any of these four Asian samples with the possible exception of Hong Kong where 42% of infants used a pacifier for a short time.

Socioeconomic deprivation and teenage mothers have also been shown to be risk factors for SIDS. Levels of these risk factors were low for these Asian samples. Mothers were married in the vast majority of cases and in the two Chinese mainland samples no mothers were unmarried. Unemployment rates for fathers were low in all samples. The Japanese culture's attitude against divorce is very strong as is the attitude that girls should live at home until they are at an age that is considered proper for marriage (from 21 years old).

E. CONCLUSIONS

These results provide descriptive data on child care practices that have been associated with SIDS. All four samples were drawn from populations where SIDS rates are low or thought to be low. Front sleep position, the most recognised modifiable SIDS risk factor, was

uncommon in all samples. However side sleep position is also a risk factor for SIDS and was used for a significant percentage of infants in these samples. Bedsharing was common in these samples and the majority of infants shared a room with one or more adults. SIDS risk from bedsharing may be mitigated by the fact that very few mothers in these samples smoked. Pillows were commonly used but it is possible that the types of pillow used may differ from those implicated with SIDS. Rates of breastfeeding were high in the Japanese and Chinese mainland samples but particularly low in the Hong Kong sample. Pacifiers were not particularly popular in any of the samples. These data should not be used to implicate any particular child care practices with SIDS, but instead to better understand the complexity and variability of child care within these different cultures.

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F. RESEARCH PRESENTATION

1) Presentation by publishments

ORIGINAL ARTICLES

ARTICLES IN REFEREED JOURNALS

1. Nelson EAS, Taylor BJ, and members of the ICCPS Study Group. International Child Care Practices Study: methodology and study population. Early Human Development. 1999; 5: 149-168.
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3. Senok AC, Li K, Nelson EAS, Chung KW. In vitro sensitivity of artemeter in Plasmodium falciparum infected beta-thalassaemic trait erythrocytes. Parasitology 1999; 118:145-149.

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2. Nelson EAS, Sullivan PB. Commonwealth Association of Paediatric Gastroenterology. Journal of Pediatric Gastroenterology and Nutrition1999; 29: 113-114.

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1. Nelson EAS. Oral rehydration practices: Hong Kong (State of Hong Kong Children). Hong Kong Journal of Paediatrics 1999; 4(2): 130-131.
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3. Nelson EAS. Dietary guidelines and childhood obesity. The Hong Kong Medical Diary 1999; 4(2):3-5.

2) Presentation in academic meeting

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1. Nelson EAS, Tam JS, Fok TF, Chan PKS.

Rotavirus surveillance in Asia. Hong Kong College of Physicians and Hong Kong College of Paediatricians Joint Scientific Meeting. Hong Kong, October 1999.
2. Nelson EAS. Protective infant care practices and education in the community. The VIIIth ESPID Conference. Jerusalem Israel, May 1999.

ABSTRACTS

1. Nelson EAS, Taylor BJ, Ceriani Cernadas JM, Jenik A. Estudio sobre las costumbres en la crianza de bebes nacidos en la maternidad del Hospital Italiano de Buenos Aires, Argentina y su comparacion con diferentes paises en relacion al sindrome de muerte subita del lactante (SMSL). Simposio Latinoamericano de muerte subita del lactante. Buenos Aires, Argentina, October 1999.
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Table 1: International Child Care Practices Study: key SIDS risk factors in infants aged three months for four Asian samples

	Beijing	Chongqing	Hong Kong	Japan	ICCPS range
Infant sleep position	n=306	n=250	n=198	n=286	
- Back	220 (72%)	189 (76%)	162 (82%)	254 (89%)	14-89%
- Side	67 (22%)	57 (23%)	35 (18%)	14 (5%)	9%-65%
- Prone (Front)	19 (6%)	4 (<2%)	1 (<1%)	18 (6%)	<1%-33%
Smoking habits of mother					
At recruitment (birth)	n=306	-	n=251	n=280	
- Smokes	0	-	6 (2%)	15 (5%)	0%-43%
- Amount (mean, SD)		-	16 (10)	12 (5)	4-16
At three months	n=306	n=250	n=197	n=289	
- Smokes	0	0	11 (6%)	27 (9%)	0%-34%
- Amount (mean, SD)			10 (5)	11 (5)	4-14
Smoking habits of father					
At recruitment	n=306	-	n=251	n=272	
- Smokes	175 (57%)	-	89 (36%)	135 (50%)	14%-74%
- Amount (mean, SD)	11 (7)	-	15 (11)	19 (10)	9-19
At three months	n=306	n=250	n=196	n=289	
- Smokes	168 (55%)	161 (64%)	64 (33%)	144 (50%)	10%-64%
- Amount (mean, SD)	10 (7)	14 (7)	12 (6)	19 (8)	7-19

Table 2: International Child Care Practices Study: Socioemographic variables and caregivers of baby at three months of age for four Asian samples

	Beijing	Chongqing	Hong Kong	Japan	ICCPS range
Socio-demographic variables	n=306	n=250	n=251	n=286	
Mother's age (mean±SD, years)	28.9±3.5	26.9±3.3	30.4±4.9	31.2±4.4	25.0-32.8
Father's age (mean±SD, years)	31.5±3.9	29.9±4.3	33.7±5.3	33.6±5.5	27.1-35.8
Mother married	306 (100%)	250 (100%)	244 (97%)	281 (98%)	45%-100%
Mother in full-time employment	276 (90%)	184 (74%)	118 (47%)	50 (18%)	16%-90%
Father in full-time employment	283 (93%)	220 (88%)	248 (99%)	258 (90%)	71%-99%
Father unemployed	5 (2%)	10 (4%)	2 (1%)	0	0%-13%
Caregiver during day	n=306	n=250	n=197	n=289	
Mother	276 (90%)	169 (67%)	111 (56%)	242 (84%)	
Father	3 (1%)	4 (2%)	1 (<1%)	0	
Both parents	0	0	3 (2%)	8 (3%)	
Parent and grandparents *	0	0	0	27 (9%)	
- (Mother, father or both)	*279 (91%)*	*173 (69%)*	*115 (58%)*	*277 (96%)*	*58%-100%*
Grandparent	27 (9%)	45 (18%)	39 (20%)	4 (1%)	
Paid Child minder	0	16 (6%)	22 (11%)	6 (2%)	

Other Relative	0	7 (3%)	13 (7%)	0	
Other	0	9 (4%)	8 (4%)	2 (1%)	
Caregiver at night	n=306	n=250	n=194	n=284	
Mother	294 (96%)	198 (79%)	145 (75%)	200 (70%)	
Father	6 (2%)	8 (3%)	1 (<1%)	7 (3%)	
Both parents	0	0	6 (3%)	73 (26%)	
Parent and grandparents *	0	0	0	3 (1%)	
- (Mother, father or both)	*300 (98%)*	*206 (82%)*	*152 (78%)*	*283 (100%)*	*78%-100%*
Grandparent	5 (2%)	27 (11%)	15 (8%)	0	
Paid Child minder	1 (<1%)	10 (4%)	11 (6%)	0	
Other Relative	0	3 (1%)	9 (5%)	0	
Other	0	4 (2%)	7 (4%)	1 (<1%)	

* code only used for the Japanese sample

Table 3: International Child Care Practices Study: infant sleeping environment at three months of age for four Asian samples

	Beijing n=306	Chongqing n=250	Hong Kong n=198	Japan n=288	ICCPS range
Infant's sleeping room					
- Infant slept in parent's room	299 (98%)	208 (83%)	141 (71%)	222 (77%)	46%-98%
- His/her own room	1 (<1%)	10 (4%)	33 (17%)	31 (11%)	
- Other room	6 (2%)	32 (13%)	24 (12%)	35 (12%)	
One or more adult in room	306 (100%)	249 (100%)	165(83%)	269(93%)	58%-100%
- one adult	*39 (13%)*	*57(23%)*	*51(31%)*	*72 (27%)*	
- two adults	*265 (87%)*	*181 (73%)*	*109(66%)*	*192 (71%)*	
- three or more adults	*2(1%)*	*11(4%)*	*5(3%) 5(2%)*		
Other child in room	1 (<1%)	1 (<1%)	53 (27%)	94 (32%)	
Infant checked after parents have gone to bed	290 (95%)	240(96%)	180(91%)	261(91%)	
If checked, median times (IQ)	2.0 (2-3)	3.0 (2-3)	3.0 (2-3)	2.0 (2-3)	
Infant shared a bed	164 (54%)	221 (88%)	73 (37%)	107 (37%)	2%-88%
- with mother	*51 (31%)*	*51 (23%)*	*43 (59%)*	*84(79%)*	
- with both parents	*110 (67%)*	*126 (57%)*	*19 (26%)*	*16 (15%)*	
- with other person/combination	*3 (2%)*	*44 (20%)*	*11 (15%)*	*7 (7%)*	
If YES, shared with whom?					
- Mother	51 (31%)	51 (23%)	43 (59%)	84(79%)	
- Both parents	110 (67%)	126 (57%)	19 (26%)	16 (15%)	
- Other	3 (2%)	44 (20%)	11 (15%)	7 (7%)	
If YES, for shared for how long?					
- <2 hours	4 (2%)	0	5(7%)	6(6%)	
- 2-5 hours	4(2%)	0	7(10%)	18(17%)	
- >5 hours	156(95%)	221(100%)	58(83%)	83(78%)	
If YES, shared how close?					
- Direct contact	67(41%)	-	-	32(31%)	
- Close not touching	73(44%)	-	-	62(59%)	
- Arms length	24(15%)	-	-	11(11%)	
If YES, shared in what position?					
- Mother + Baby ONLY	50(31%)	62(28%)	25(39%)	-	
- Baby + Both Parents	69(42%)	77(35%)	22(34%)	-	
- Baby BETWEEN parents	45(27%)	49(22%)	13(20%)	-	
- Other combination	0	31(14%)	5(8%) -		

Pillow used	289 (95%)	237(95%)	156(80%)	161(56%)	4%-95%
Whole body placed on pillow	*0*	*7*	*3*	*2*	
Type of pillow					
- Cotton	*53*	*156*	*100*	*48*	
- Foam	*6*	*1*	*21*	*4*	
- Other	*231*	*75*	*15*	*5*	
*- Bean Chips **	*0*	*0*	*0*	*16*	
*- Doughnut shaped pillow **	*0*	*0*	*0*	*28*	
*- Folded towel **	*0*	*0*	*0*	*52*	

* codes only used for the Japanese sample

Table 4: International Child Care Practices Study: infant feeding method at three months of age for four Asian samples

	Beijing	Chongqing	Hong Kong	Japan	ICCPS range
Infant Feeding Method					
- Breast ONLY	130 (43%)	85 (34%)	8 (4%)	137 (47%)	4%-80%
- Mainly breast + some Formula	54 (18%)	48 (19%)	9 (5%)	61 (21%)	
- Mainly formula + some breast	53 (17%)	28 (11%)	7 (4%)	36 (13%)	
(Any breast	*237 (77%)*	*161 (64%)*	*24 (12%)*	*234(81%))*	
- Formula ONLY	68 (23%)	71 (28%)	172 (87%)	55 (19%)	6%-88%
- Other	1 (<1%)	18 (7%)	1 (<1%)	0 ?7 (2%)	
Intention to Breast feed *	99%	-	40%	99%	
Ever Breast Fed	95%	86%	39%	99%	39%-99%
Breast fed but stopped	58/73 (80%)	47/79(60%)	52/166(31%)	56/56(100%)	
Mean age stopped (SD)	3.8 (2.5)	4.3 (2.8)	3.5 (2.2)	7.7 (4.7)	
Pacifier used:	70 (23%)	40 (16%)	82 (42%)	36(13%)	13%-71%
- Most of the time	21(7%)	1(<1%)	1(<1%)	2(<1%)	
- Short time	49 (16%)	39 (16%)	81 (42%)	34 (12%)	

*At recruitment interview

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分担研究報告書

最新（1998年—1999年）のSIDSの関連文献の検討

分担研究者：仁志田 博司（東京女子医科大学　母子総合医療センター教授）

要旨
平成10年から11年（1998～1999）の間に、医学中央雑誌およびインディクッス・メディックスに見られた、SIDS関連文献は和文52および英文155の合計207論文について検討を加えた。本邦からは、基礎研究は相変わらず極めて少ないが、総説の数は前年に比し多く見られ、SIDSに対する関心の高まりを示すものと評価される。疫学においては、SIDSのリスク因子が明らかにされ、マイナリティーグループなどのよりハイリスクグループへ、その情報を如何に伝えるかが問題とされている。また、うつ伏せ寝、煙草などのリスク因子として知られているものの病態生理学的解明が行われつつある。病因・病態に関しては、感染そのものではなく、サイトカイン系などを介してSIDSのリスクを高めていることが重要視されるようになってきた。SIDSの中心病態として知られている覚醒反応の遅延に関与する脳幹部の病変の病因に関し、低酸素血症によるものや発達遅延によるものなどの研究がなされると共に、心拍数の変動性の周波数解析の技術によって自律神経系の機能が評価されるようになり、ハイリスク群のスクリーニングのみならず、基本的な病態へ一歩踏み込んだ研究となりつつある。

1．総説

SIDSの全体像を俯瞰したいくつかの優れた総説がある。（2948、2949、2950、2959，2979、3017、3061）注目すべき論文は主に法医学者の観点からSIDSと診断された事例が後に事故や犯罪などであることが判明する例が少なからずあるところから、またSIDSが除外診断であり、確たる診断の根拠となる所見がないジレンマから、SIDSという疾患そのものを否定する論調の論文が見られるようになったことは注目にあたいする。（3042、3006、3010、3016）しかし、熱性痙攣を脳波の検査や身体所見に特に異常が見られないところから、痙攣はなかったとすることができないように、やがて落ち着くところに落ち着く一理的な現象と理解されよう。SIDSだけを取り上げる議論よりも、乳児の全体を捉え、その中からSIDSを取り出して議論する事が、SUDIの対応およびその解明に重要であるとする意見は傾聴にあたいする。（3017）

2．疫学

日本の厚生省による疫学調査の結果が報告されている（2947、2951、2962）。日本を含めSIDSは増加の傾向にあるか（3091）。アジア流の子育てがSIDSの発生頻度を下げているかの論文（2994、3044）がみられる。リスク因子のキャンペーンによって大幅にSIDSの発生頻度が変化したことから、疫学データにも大きな影響を与えている。うつ伏せが減ったことは寒い時期のより小さな子供のSIDSを減少させたことから季節変動がなくなり（2998、

3001、3052)、またキャンペーンの効果がマイナリティーグループに十分の伝わらないことから、カリフォルニアでは白人の減少率が 40％であることに対し、黒人の減少率が 20％であるため、黒人と白人の SIDS 発生頻度の差が従来の 2.5 倍から、4 倍に広がったことが述べられている。(3013) 同様にマイナリティーグループに対する働きかけの問題点が取り上げられている。(3036、3046) キャンペーンの効果がもっとも明らかになったオランダでは、1995 年にシズの発生頻度が出生 1,000 に対して 0.26 となり、それ以上の減少はリスク因子を減らす啓蒙に加え、個々の指導が大切としている。(3044) 従来のうつ伏せ、母親の煙草、母乳などのシズに関する因子は、児が感染に罹患しているかを加味すると、そのリスク因子の影響がさらに変わることが指摘された。(3086) 煙草に関しては出生前と出生後の曝露による因子を分ける研究が試みられ、出生後の曝露は出生前ほど大きな影響がない可能性が指摘され、SIDS の病因・病態を考える上でのヒントなると指摘されている。(3048)

その他、双胎は体重による影響以外 SIDS のリスク因子ではないこと (3040) オーストリーのチロル地方など高度の高い所に住むほど SIDS の頻度が高い こと (3043)、カフェインより母胎のアルコール使用がリスク因子であること (3082)、おしゃぶりが SIDS を減少させるかどうか (3083)、などの論文などが見られる。

3．育児環境に関する論文

もっとも SIDS の発生頻度が低いオランダにおいては、さらに低下させるためには、寝返りを予防する寝袋の使用を勧めている。(3004) オーストラリアやニュージーランドで用いられているシープスキンは、うつ伏せの場合は SIDS の頻度を大幅に上げるが、仰向けの場合は大きな関係はないとされた。(3009) タスマニア等において 1988 年から 1995 年にかけて一ヶ月時のうつ伏せ寝と仰向け寝を比べたところ SIDS のリスク因子とは考えられないと言うデータも見られている。(3071) 煙草に関しても幾つかの論文が見られ (3006、3048、3060、3061) また、添い寝に関しては煙草を吸う母親はリスクとなるが、それ以外の場合は必ずしもリスク因子とはならないことが述べられている。(3097)

4．病因・病態

前年度に発表された QT 延長症候群と SIDS の関連については、多くのコメントが述べられているが、否定的な見解が多く、特にアメリカ小児科学会の機関誌である PEDIATRICS にチーフエディターのルーシー教授を始め、８編の著明な小児科医らの意見が特集のように載せられている。(3021-3028) 感染と SIDS の関係においては、感染そのものではなく、明らかな症状が出ないレベルでもサイトカイン系などを介して、覚醒反応の遅延を助長することで SIDS のリスク因子となっている可能性が述べられている。(2997、3007、3030、3037、3086、3087) SIDS の中心病態として知られるようになってきている覚醒反応の遅延に関与した中枢神経系の病変に関与した多くの論文が上げられている中 (2957、2980、3008、3029、3032、3035、3051、3063、3073) それらの中で、妊婦の喫煙が虚血性低酸素性侵襲を介して、児の脳幹部のグリオーシスを起こしている

（3051）、それが引き金となってapoptosis を越しているため従来の病理学的検索では見逃されていること（3032）、自律神経系の異常が SIDS のリスク因子となっている（3029）などが、特筆されよう。特に心拍数の変動制の周波数分析から自律神経系を評価する方法で、SIDS のリスク群にみられる閉塞性無呼吸児において、自律神経系がコントロール群と異なった状態および反応を示すデーターは、SIDS の病態のみならず、その予防にもつながる重要な研究と評価されている。（3029）

5．その他

家族のサポートに関しては、本邦から特集として出されていることもあり、多くの論文が見られる。（2951、2966-2977、3055、3064、3069）ホームモニタリングに関しては、（2964、3011, 3064）モニター中に死亡した症例の記録の分析において 9 例中 7 例でアラームの前後に Gasping が起こっており、Gasping は低酸素によって起こるところから呼吸心拍モニターではとらえない低酸素血症が起こっている可能性が述べられ、今後のモニタリングにパルスオキシメータの必要性が示唆されている。（3031）SIDS のハイリスク児のスクリーニングにおいては、心拍数の周波数解析から自律神経系をみる可能性（3029）と呼吸のパターンによって周波数解析を行うと Slow Oscillation Pattern がみられる（3066）などの文献がある。

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