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CHILDREN WITH THALIDOMIDE EMBRYOPATHY: ODONTOLOGICAL OBSERVATIONS AND ASPECTS

by

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INTRODUCTION

It is now well documented that the mother's intake of the drug Thalidomide® (*N*-phthaloylglutamimide) during pregnancy may cause severe injuries to the foetus [6, 9]. These injuries have been recognized as forming a syndrome of malformations, denoted as the dysmelia syndrome, Wiedemann's syndrome or Thalidomide embryopathy [10, 11, 13].

Characteristic features of Thalidomide embryopathy are malformations of the extremities, of which the following have been reported: bilateral amelia or phocomelia of the arms, bilateral aplasia or hypoplasia of the radius or thumb, uni- or bilateral 3-phalangism of the thumb, bilateral amelia or phocomelia of the lower limbs. Microtia, hæmangioma of the upper lip and facial paralysis have been specially mentioned as coincident lesions. Among other associated malformations are cardiac anomalies, stenosis or atresia of the digestive tract, renal and genital malformations, and malformations of the brain and eyes [3, 10, 11, 13, 14, 15].

As early as 1962, the view was expressed in the Lancet that dental development would probably also be affected by Thalidomide during the foetal stage [2]. In addition to direct damage to development of the teeth, secondary damage is also conceivable as a result of a disturbance in, *e.g.* development of the facial skeleton.

We therefore considered it well motivated to make an odontological study of children with Thalidomide embryopathy, based on the following questions:

1. To what extent does the mother's intake of Thalidomide during pregnancy cause disturbances in tooth development?
2. To what extent is tooth development affected by the hæmangioma which, in children with Thalidomide embryopathy, is usually localized to the upper lip?
3. To what extent are development of the jaws and the caries situation affected in the children with Thalidomide embryopathy who have facial paralysis?
4. Is there an increased risk of accidents with resulting damage to the teeth in children with severe extremital malformations?
5. Is there a special need of dental care, and what are the prerequisites for dental care in children with Thalidomide embryopathy?

MATERIAL AND METHODS

The approximately 100 now living children with Thalidomide embryopathy in Sweden have been admitted, for somatic and psychiatric care and rehabilitation, to centres in Stockholm, Gothenburg, Lund and Umeå. During the autumn of 1964, 40 of the 42 children in the Stockholm area attended the School of Dentistry in Stockholm for examination, after being summoned by the almoner at Eugeniahemmet* (see Table I). On this occasion, 14 of the children were resident at Eugeniahemmet, and 28 were living at home.

At examination, the children's age ranged from 2 $^{3}/_{12}$ years to 4 $^{5}/_{12}$ years (average 3 $^{3}/_{12}$); 22 were boys and 18 were girls.

*) Institution for Handicapped Children, Stockholm.

Examination of the teeth and the occlusion was performed by two dentists at the Department of Pædodontia, according to the scheme used for detailed records. Only one child (case 8) could not be examined.

Roentgenological examination was performed at the Department of Oral Roentgenology, in most cases on the same day. Extraoral placing of the films was used for the lateral parts of the jaws, and intraoral placing for the regions of the incisors and canines. Casettes with intensifying screens were used in the extraoral technique. No roentgenological examination could be made in 4 children (cases 7, 8, 17 and 33).

Caries prophylaxis was carried out in the form of painting with 2 % NaF solution in connexion with the examination. In addition, the children's parents and helpers were given information and advice about oral hygiene and diet. The Society for Prevention of Dental Diseases' pamphlets "Healthy Teeth" and "Fluoride in Everyday Use" were sent to them at the same time as the results of examination of the individual child.

As far as possible, the current need of dental care was fulfilled, with regard paid to economic, geographical and administrative factors.

The time during pregnancy when Thalidomide was taken, as well as the children's physical developmental anomalies, had been recorded previously at Eugeniahemmet (see Table I).

RESULTS

Disturbances in Tooth Development

Numerical deviations

Deviations in the number of teeth were evaluated after the clinical and roentgenological examination, made in 39 and 36 children, respectively (Table II).

Hypodontia was recorded in 4 children. In every case, the missing teeth were primary lateral incisors or the germ of permanent lateral incisors; 7 of the aplasias were in the upper jaw and 2 in the lower. In all but one case, there was concurrent aplasia of the lateral incisors in both dentitions (Table II).

Hyperdontia was observed in only one child; she had an extra primary molar and an extra germ of a premolar in the upper jaw (Table II).

Table I

Survey of data in 40 children with Thalidomide embryopathy

Case no.	Age at exam. Yrs	Age at exam. Mths	Mother's intake of Thalidomide: Verified	Mother's intake of Thalidomide: Month	Gross malformations
♂ 1	4	0	N.	M II-III	Bil. upper and lower phocomelia
♂ 2	4	2	N.	M III	Bil. upper phocomelia, dysmelia r. leg, microphthalmos R. E.
♂ 3	2	7	N.	M II	Bil. radius aplasia, choanal atresia
♀ 4	3	5	N.	M?	Bil. microtia, bil. palatal paralysis
♂ 5	4	2	N.	M I-II	Bil. radius aplasia
♀ 6	2	10	N.	M I-II	Bil. lower phocomelia, bil. 3-phalang. dig. I, dysplasia dig. V r. hand
♂ 7	3	9	N.	M II-III	Dysplasia of thumbs, bil. abducens paralysis, anomalies l. middle and internal ear, probably deaf l. ear
♂ 8	2	9	N.	M I-III + 6 mths bef. pregn.	Aplasia of thumbs, bil. facial paralysis, palatal and abducens paralysis, total deafness, vascular anomaly of one lung
♂ 9	2	3	N.	M II	Bil. upper phocomelia
♂ 10	3	5	N?	M?	R. radius aplasia, bil. abducens paralysis, deaf r. ear, probable malformation r. kidney
♀ 11	4	2	N?	M?	Arthrogryposis
♀ 12	3	0	N.	M?	Hearing damage, not totally deaf
♀ 13	3	2	N.	M II-III	Dysmelia both hands, syndactylia dig. II and III l. hand, bil. abducens paralysis, patent ductus arteriosus, asthma
♂ 14	4	1	N.	M I-II	Bil. upper phocomelia, l. facial paralysis, palatal paralysis, bil. abducens paralysis, total deafness
♀ 15	3	3	N.	M II-V	Bil. upper amelia
♀ 16	3	0	N?	M?	Bil. syndactylia hands and feet, low position external ears, cleft palate
♂ 17	2	9	N.	M II-III	Bil. dysplasia of hands
♂ 18	2	10	N?	M?	Bil. dysplasia of upper limbs, r. facial paralysis, malformed r. external ear, vestibule r. ear missing, cong. organic heart disease, anal atresia, hypospadias
♀ 19	1	10	N.	M II	R. radius aplasia
♀ 20	4	5	N.	M I-II	Bil. upper amelia
♀ 21	2	3	N.	M II	Microtia and hearing defect r. ear

Table I continuation

Case no.	Age at exam. Yrs	Mths	Mother's intake of Thalidomide		Gross malformations
			Verified	Month	
♂ 22	3	3	N.	M II-III	Bil. radius aplasia, bil. abducens paralysis, r. external ear malformed, patent ductus arteriosus, myelomeningocele
♀ 23	2	3	N.	M I-II + 1 mth bef. pregn.	Bil. upper phocomelia
♂ 24	3	2	N.	M I	Dysplasia of both hands and scapulae, bil. abducens paralysis, total deafness, disturbance of balance
♀ 25	4	1	N.	M I-IV	Bil. upper phocomelia, bil. abducens paralysis
♂ 26	2	5	N?	M?	R. upper phocomelia
♀ 27	3	1	N.	M II	Bil. lower phocomelia, bil. upper dysmelia
♂ 28	3	7	N.	M I-X + 2 yrs bef. pregn.	Bil. upper and lower phocomelia
♂ 29	3	8	N.	M II	Dysplasia l. hand, thoracic anomaly with fused ribs
♀ 30	2	9	N.	M II	Bil. lower phocomelia, bil. polydactylia, bil. aplasia of thumbs, anal atresia
♂ 31	4	4	N.	M I	Bil. upper phocomelia
♀ 32	2	7	N.	M III-IV	Bil. lower phocomelia, r. radius aplasia, bil. 3-phalang. thumbs, vagina duplex
♀ 33	3	0	N.	M I	Bil. facial paralysis, palatal paralysis, multiple paresis of eye muscles, total deafness, no sense of balance, grossly malformed external ears
♂ 34	3	5	N.	M I	Dysplasia r. femur
♂ 35	3	1	N.	M II-III + bef. pregn.	Bil. radius aplasia, bil. dislocation hip joint, l. club-foot, nævus on forehead
♂ 36	3	10	N.	M I-II	Bil. upper phocomelia
♀ 37	2	10	N.	M II-V	Bil. dysplasia of hands, l. club-foot, anal atresia
♂ 38	4	1	N.	M I-II	L. facial paralysis, hearing defect l. ear, bil. microtia
♂ 39	2	7	N.	M I-III	Bil. upper phocomelia
♀ 40	3	4	N.	M?	Bil. lower phocomelia, r. radius defect

Thalidomide intake: N = verified
N? = not verified
MI = time from 1st day of last menstruation and 28 days onwards = 1st month of pregnancy
M? = time of Thalidomide intake unknown

Table II

Deviations in number of teeth in children with Thalidomide embryopathy (39 examined clinically and 36 roentgenologically)

Hypodontia[1]			Hyperdontia[1]		
Case no.	Primary teeth	Permanent teeth	Case no.	Primary teeth	Permanent teeth
3	+02, 02+	+2, 2+	13	04+	4+
6	—02	—2			
16		2+			
25	02+	2+			
Total 4	4	5	1	1	1

[1] See Footnote, p. 14.

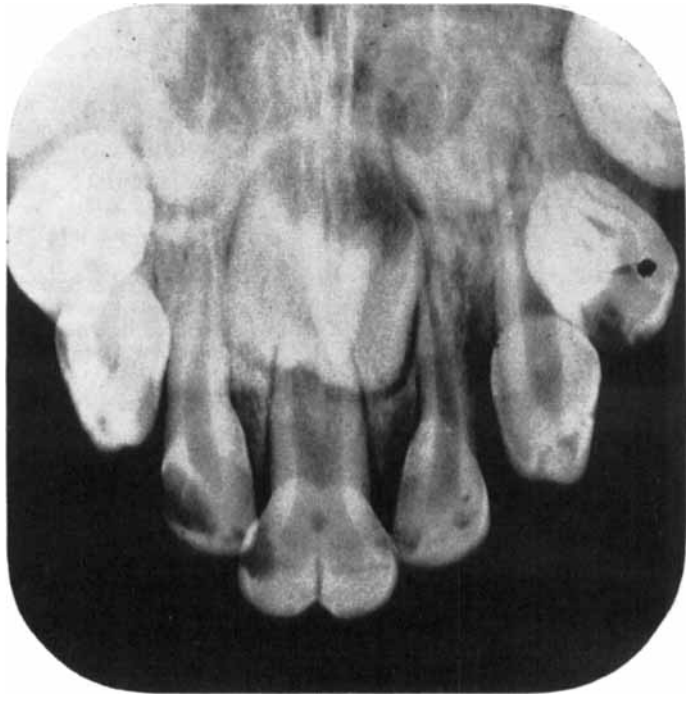

Fig. 1. Intraoral radiograph illustrating double formation of central incisors in both dentitions; case 16.

Table III

Deviations in shape of crown in children with Thalidomide embryopathy (39 examined clinically and 36 roentgenologically)

Case no.	Primary teeth	Permanent teeth
13	04[1]+, 03[2]+	
16	+01[3], 01[3]+	+2[4], +1[3], 1[3]+
22	+03[4]	
25		+2[4]
37	02[3]—, 03[3]—	
Total 5	7	4

[1]resembles premolar [2]peg tooth [3]double formation [4]malformed

Deviation in shape of crown

Deviations in shape of the crown were found in 5 children after clinical and roentgenological examination (39 and 36 children, respectively). The severest form of anomaly was noted in case 16; there was, *e.g.* double formation of medial incisors in both the primary and permanent dentition (Table III and Fig. 1).

Disturbance of mineralization

Enamel hypoplasia was found at clinical examination in 19 of 39 children, *i.e.*, 48.7 %. The largest number of teeth with hypoplasia of the enamel was 13 in case 25, and 10 each in cases 5 and 22 (Table IV).

Changes in colour indicative of special disturbances of mineralization were recorded in 6 children (cases 3, 20, 21, 22, 25 and 32). There was a wide range of variation in both appearance and localization.

Malocclusion

Deviations from normal occlusion were observed in 22 of 39 children examined clinically. The distribution of the various type of malocclusion is shown in Table V.

Table IV

Number of teeth with enamel hypoplasia in children with Thalidomide embryopathy (39 examined clinically). — The cases in which no enamel hypoplasia was recorded are not included in the table

Case no.	No. of teeth with hypoplasia	Case no.	No. of teeth with hypoplasia
1	6	20	1
3	2	22	10
4	1	23	6
5	10	25	13
6	2	31	3
7	1	34	6
13	4	35	1
14	2	38	3
16	5	40	2
18	2		

Table V

Different forms of malocclusion in children with Thalidomide embryopathy (39 examined clinically)

	Mandibular prognathism	Linguo-version	Maxillar protrusion	Lateral crossbite	"Scissors bite"[1])	Excessive overbite	Open bite
Case no.	2	3	31	14	31	4	5
	35	4		16		11	7
		14				14	15
		17				22	21
		30				23	29
		32				31	33
		33					36
		35					37
		40					
Total 22	2	9	1	2	1	6	8

[1]) Lingual occlusion of lower to upper premolars and molars.

Table VI

Incidence of caries given as the ratio of the total number of carious teeth (including those filled or extracted on account of caries) to the total number of teeth erupted or in process of eruption in children with Thalidomide embryopathy (39 examined clinically)

Case no.	Incid. of carious teeth	Case no.	Incid. of carious teeth
1	3/22	21	2/20
2	0/20	22	4/20
3	7/18	23	0/16
4	14/20	24	3/20
5	10/20	25	7/19
6	16/19	26	9/20
7	6/20	27	0/20
8	—	28	2/20
9	0/19	29	7/20
10	0/20	30	0/20
11	2/20	31	7/20
12	3/20	32	0/20
13	6/21	33	0/20
14	1/20	34	1/20
15	6/20	35	1/20
16	17/17	36	0/20
17	3/20	37	2/16
18	0/20	38	8/20
19	0/16	39	4/20
20	1/20	40	1/20

Caries Situation

The *incidence of caries* in the 39 clinically examined children is given in Table VI as the ratio of the total number of carious teeth (including those filled or extracted on account of caries) to the total number of teeth erupted or in the process of eruption. A large individual variation was noted, ranging from one

Table VII

Distribution of the number of carious teeth (including those filled or extracted on account of caries) in the two sides of the jaw in children with Thalidomide embryopathy (39 examined clinically)

Case no.	Left side: no. of carious teeth	Right side: no. of carious teeth	Case no.	Left side: no. of carious teeth	Right side: no. of carious teeth
1	0	3	21	1	1
2	0	0	22	2	2
3	4	3	23	0	0
4	6	8	24	1	2
5	5	5	25	3	4
6	7	9	26	4	5
7	3	3	27	0	0
8	--	—	28	1	1
9	0	0	29	3	4
10	0	0	30	0	0
11	0	2	31	3	4
12	1	2	32	0	0
13	2	4	33	0	0
14	1	0	34	1	0
15	3	3	35	0	1
16	8	9	36	0	0
17	1	2	37	0	2
18	0	0	38	4	4
19	0	0	39	2	2
20	0	1	40	0	1

child (case 16) with caries in every tooth to a complete absence of caries (cases 2, 9, 10, 18, 19, 23, 27, 30, 32, 33 and 36).

The *distribution* of the carious teeth in the two halves of the jaw is shown in Table VII.

Dental Injuries Due to Accident (Mechanical Trauma)

Trauma, particularly to the upper-jaw incisors, was noted in 8 children (cases 9, 22, 26, 31, 34, 36, 38 and 39). The dental injuries ranged from insignificant damage to the enamel to severe lesions of the pulp. That trauma had, in fact, occurred was verified not only by the data in the history, but also by the presence of changes in colour of the tooth crown, roentgenologically demonstrable root resorption and calcification of the pulp chamber.

DISCUSSION

It must be established that it has not been considered possible, on the basis of the present investigation, to answer all the questions listed in the introduction as motivating an odontological study of children with Thalidomide embryopathy. The investigation has, however, given valuable information, which will be discussed in the following.

1. *The extent to which the mother's intake of Thalidomide during pregnancy causes disturbances in tooth development in the child* must be evaluated on the basis of the occurrence and type of numerical deviations (hypodontia and hyperdontia), deviations in shape of the crown and disturbances of mineralization.

All cases of hypodontia involved lateral incisors. It has previously been shown that aplasia of lateral incisors is one of the commonest types of hypodontia in the permanent teeth (7). In a Swedish series of 1173 children, hypodontia of the primary teeth was present in 0.4 % (4). In the present series, the corresponding incidence is 7.7 %, which is much higher than in the aforementioned normal material. Good agreement with earlier observations of concurrent aplasia of a primary tooth and of the corresponding permanent tooth (4) is shown by the occurrence of 3 such cases out of the 4 with hypodontia. It has been stated that genetic factors are responsible for this form of aplasia (4). The ætiology of hypodontia is regarded as incompletely clarified.

In the aforementioned material, the incidence of hyperdontia was given as 0.3 % (4). In the present series, the corresponding incidence is 2.6 %, which represents a single case (Table II).

Double formation seems to be the most interesting of the various types of deviation in shape of the crown (Table III). In the

Swedish normal material, the incidence of double formation was 0.5 % (4), as compared to 5.2 % in our series. In one of our patients (case 16), the medial incisors in both dentitions showed double formation. The difficulty of distinguishing between gemination and fusion is evident (12). The child in question had hypodontia (2+)*, deviation in shape of a tooth (+2) and isolated cleft palate. In case 37, double formation was present in the form of fusion of 02— and 03—.

According to *Grahnén & Granath* (4), the most common site of double formation with hypodontia in the same region seems to be the lower-jaw incisors. They stated that double formation without hypodontia in the same region was most frequent in the upper-jaw incisors (8 cases), whereas the lateral incisor and canine of the lower jaw were involved in 3 cases.

In the present series, the incidence of enamel hypoplasia in the primary dentition was extremely high, *i.e.*, 48.7 %. In a study of the occurrence of disturbances of mineralization in prematures, *Grahnén & Larsson* reported the incidence of symmetric and isolated macroscopical hypoplasia of the enamel to be 8.2 % in the control group and 26.5 % in the premature group (5).

It has often been stated that prenatal injuries to the enamel are exceedingly rare (8). Our results indicate that in some of the children with Thalidomide embryopathy, a disturbance in enamel development had occurred prenatally. It can be presumed that, in most cases, enamel hypoplasia in the primary dentition is a type of indirect injury, since no direct correlation to the time of intake of Thalidomide was demonstrable (Tables I and IV).

In particular the incidence of hypodontia and of disturbances of mineralization in the children with Thalidomide embryopathy indicate that Thalidomide did, in fact, also cause a disturbance in tooth development.

2. *The present study gave no information about the extent to which tooth development is affected by hæmangioma of the upper lip ("Schnurrbarten hämangiom").* A nævus, located on the forehead, was present in only one child (case 35).

*) According to the Haderup dental stenography, + indicates the upper jaw, and — the lower jaw. If the sign is placed to the right of the numeral, the right tooth is indicated and *vice versa*. Zero before the number indicates the primary teeth.

3. *Development of the jaws and the caries situation did not seem to be influenced by facial paralysis,* diagnosed in 5 children. In two of them (cases 8 and 33) it was bilateral. It is evident from Tables I and VII that no difference was present between the incidence of caries in the right and left side of the jaw in the 3 children with unilateral facial paralysis (cases 14, 18 and 38), as compared to the rest of the group.

Only in one of these 3 children (case 14) was malocclusion noted, *i.e.,* linguoversion of 03+, lateral crossbite at 05+ and excessive overbite (Table V). Malocclusion was thus more pronounced on the right side. The relation to the left-sided facial paralysis is not altogether clear.

4. *An increased risk of accidents with resulting damage to the teeth seemed to exist in the children with extremital malformations.* As can be inferred from the results on page 13 and the data on extremital malformations in Table I, 6 of the 8 children who had accidents to the teeth had anomalies of the upper limbs (cases 9, 22, 26, 31, 36 and 39). Only one of them (case 22) had, in addition, paralysis of the lower limbs. One of the other two children (case 34) had dysplasia of the right femur, whereas case 38 had no extremital defect. Our observations indicate that extremital defects of such type that a fall forwards cannot be broken or prevented effectively imply an increased risk of dental accidents (1). Naturally, other factors may be contributory, *e.g.* the child's development, temperament, motility and balance.

5. *The question whether there is a special need of dental care in children with Thalidomide embryopathy must be answered unconditionally in the affirmative.* This is motivated in the following, together with a discussion of the prerequisites for adequate dental care.

We wish to emphasize that these children — many of whom are already severely handicapped — must not be exposed to additional physical and mental stress in the future, which might result from neglected dental care.

Our investigation has shown that a great need of dental care exists in these children, and that it will in many cases persist for a long time.

Operative treatment already of the temporary dentition, in

view of caries and dental accidents, implies a considerable acute task for the group as a whole (see Table VI and p. 13). In most cases, enamel hypoplasia does not seem to call for therapeutic measures, either for functional or æsthetic reasons.

A great future need of *orthodontic and prosthetic treatment* is indicated by: A) dental accidents that have already occurred, and the risk of further such accidents in both dentitions (p. 13); B) deviations with respect to both number and shape of teeth in the temporary as well as in the permanent bite (Tables II and III); and C) the fact that more than half the children show various forms of malocclusion even of their primary teeth (Table V).

Consequently, it must be regarded as of the utmost importance to make arrangements for both the current dental care of these children, and for various kinds of prophylaxis. Although it has been possible, in connexion with the present investigation, to take certain steps in this direction, much remains to be done.

Other categories of handicapped children have a similar need of special dental care. Mention can be made of children with cleft lip and cleft palate (orthodontic and prosthetic correction of the jaws and operative dental care), and blind children (particularly treatment of dental injuries due to accidents).

It is evident from the aforegoing that it is essential for dental care of the handicapped children to be organized in a suitable manner, taking into account psychological, economic and social factors, both in the affected children and in their parents.

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SUMMARY

An odontological study has been made of 40 children with Thalidomide embryopathy in the Stockholm area. The five questions that were regarded to motivate the investigation were:

1. To what extent does the mother's intake of Thalidomide during pregnancy cause disturbances in tooth development?

2. To what extent is tooth development affected by the hæmangioma which, in children with Thalidomide embryopathy, is usually localized to the upper lip?

3. To what extent are development of the jaws and the caries situation affected in the children with Thalidomide embryopathy who have facial paralysis?

4. Is there an increased risk of accidents with resulting damage to the teeth in children with severe extremital malformations?

5. Is there a special need of dental care, and what are the prerequisites for dental care in children with Thalidomide embryopathy?

The investigation gave the following information and answers to the respective questions:

1. In particular, the incidence of hypodontia and of disturbances of mineralization indicated that Thalidomide does, in fact, also cause a disturbance in tooth development.

2. This question could not be answered, since none of the children had a hæmangioma of the upper lip.

3. Development of the jaws and the caries situation do not seem to be influenced by facial paralysis.

4. An increased risk of accidents with resulting damage to the teeth seems to exist in children with extremital malformations, especially of such type that a fall forwards cannot be broken or prevented effectively.

5. A special need of dental care has been found to exist in children with Thalidomide embryopathy. This need — comprising prophylaxis, operative, orthodontic and prosthetic treatment — does, however, greatly resemble that in other categories of handicapped children. It is therefore concluded that dental care of the handicapped children should be arranged, with due regard to psychological, economic and social factors.

RÉSUMÉ

LES ENFANTS PRÉSENTANT UNE EMBRYOPATHIE DUE AU THALIDOMIDE: OBSERVATIONS ET ASPECTS ODONTOLOGIQUES

Les auteurs présentent une étude odontologique de 40 enfants de la région de Stocholm présentant une embryopathie due au Thalidomide. Les cinq questions considérées comme motivant ces recherches étaient:

1. Dans quelle mesure l'absorption de Thalidomide pas la mère pendant la grossesse détermine-t-elle des troubles du développement dentaire?

2. Dans quelle mesure l'hémangiome affectant fréquemment la lèvre supérieure des enfants présentant une embryopathie due au Thalidomide influe-t-il sur le développement dentaire?

3. Dans quelle mesure le développement des maxillaires et la carie observée sont-ils touchés chez les enfants présentant une embryopathie due au Thalidomide avec paralysie faciale?

4. Existe-t-il une augmentation des risques d'accidents causant des lésions des dents chez les enfants atteints de malformations graves des extrémités?

5. Existe-t-il un besoin spécial de soins dentaires et quelles sont les exigences des soins dentaires aux enfants présentant une embryopathie due au Thalidomide?

Les recherches effectuées ont donné les renseignements suivants, répondant à chacune des questions ci-dessus:

1. L'incidence de l'oligodontie et des troubles de la minéralisation a notamment indiqué que le Thalidomide provoque effectivement aussi des troubles du développement dentaire.

2. Il n'a pas été possible de répondre à cette question, aucun des enfants ne présentant d'hémangiome de la lèvre supérieure.

3. Le développement des maxillaires et la carie observée ne semblent pas être influencés par la paralysie faciale.

4. Il semble exister une augmentation des risques d'accidents causant des lésions des dents chez les enfants atteints de malformations des extrémités, spécialement lorsqu'elles empêchent par leur nature d'éviter ou d'amortir efficacement les chutes en avant.

5. La présente étude a montré qu'un besoin spécial de soins dentaires existe chez les enfants présentant une embryopathie due au Thalidomide. Ce besoin, qui comprend la prophylaxie et les traitements opératoires, orthodontiques et prothétiques, ressemble cependant beaucoup à celui des enfants présentant d'autres types d'infirmité. On peut donc conclure que les soins dentaires aux enfants présentant une infirmité devraient être organisés en tenant compte des facteurs psychologiques, économiques et sociaux.

ZUSAMMENFASSUNG

ODONTOLOGISCHE UNTERSUCHUNGEN ÜBER KINDERN MIT THALIDOMIEMBRYOPATHIEN

Vierzig Kinder mit Thalidomidembryopathien innerhalb des Behandlungsraumes Stockholm sind odontologisch untersucht worden. Folgende fünf Fragestellungen motivierten die Untersuchung.

1. Kann die Thalidomidkonsumtion der Mutter während der Graviditet Zahnentwicklungstörungen verursachen?

2. Kann die Zahnentwicklung durch Hämangiome, die bei Kindern mit Thalidomidembryopathien gewöhnlich ihren Sitz in der Oberlippe haben, beeinflusst werden?

3. Können Kieferentwicklung und Cariessituation bei den Thalidomidgeschädichten Kindern durch Facialisparese beeinflusst werden?

4. Kann bei Kindern mit schweren Missbildungen der Extremitäten ein grösseres Risiko für Unglücksfälle und damit verbundenen Zahnschäden bestehen?

5. Besteht ein besonderer Bedarf an Zahnpflege und welches sind die Voraussetzung für eine Zahnpflege bei Kindern mit Thalidomidembryopathien?

Die Untersuchung gab folgende Informationen und Antworten auf die respektiven Fragen:

1. Die Frequenz von Hypodontie und Mineralisationsstöhrungen bei den untersuchten Kindern mit Thalidomidembryopathien

scheint darauf hinzudeuten, dass Thalidomid auch die Zahnentwicklung stört.

2. Diese Frage konnte nicht beleuchtet werden, da keines der Kinder ein Hämangiom an der Oberlippe hatte.

3. Kieferentwicklung und Cariessituation scheinen nicht von der Facialisparese beeinflusst zu werden.

4. Bei Kindern mit schweren Missbildungen der Extremitäten scheint ein erhöhtes Risiko für Unglücksfälle verbunden mit Zahnschäden, vorzuliegen, vor allem wenn der Fall nach vorne nicht gebremst oder effektiv verhindert werden kann.

5. Man fand, dass ein besonderer Bedarf an Zahnpflege bei Kindern mit Thalidomidschäden vorhanden ist. Dieser Bedarf an Zahnpflege — der Prophylaxe, konservierende, orthodontische und prothetische Behandlung umfasst — hat grosse Ähnlichkeit mit dem Zahnpflegebedarf aller Invalidisierten. Es ist daher eine gemeinsame Lösung der Zahnpflege für alle invalidisierten Kinder anzustreben wobei genügend Rücksicht auf psychologische, ekonomische und sociale Faktoren zu nehmen ist.

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