Psychogenic Vomiting 1976-1981, Follow-up Treatment Results up to 1996†

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Abstract

During the period from 1976 to 1981, six children suffering from severe vomiting caused by psychological problems were admitted to Yuwaprasart Waithayopathum Hospital. These patients had been admitted to general hospitals from four to over ten times for the treatment of chronic recurrent vomiting, in each case the vomiting was very severe which caused dehydration. Three cases received surgical treatment, but abnormalities in the abdominal cavity were not seen in any of them. The treatment in Yuwaprasart Waithayopathum Hospital consisted of symptomatic treatment, medication, psychotherapy, behavior therapy, recreational therapy, occupational therapy, learning in special classes and family psychotherapy.

Follow-up treatment results up to 1996 (20 years). The result revealed that five patients improved and were normal with subsequent discontinuation of all medication except one female patient who had moved with her family to another country.

Children with chronic vomiting from psychogenic causes get help from doctors off and on. Chronic vomiting can cause death through severe dehydration and electrolyte imbalance. Some of the patients had hypokalemic paralysis. Many physical illnesses which had chronic vomiting symptoms such as renal failure, suprarenal gland dysfunction, increased intracranial pressure and cancer of the stomach. Nevertheless, psychogenic causes should be considered as well once we have excluded physical problems(1).

In order to find out what the real cause is, we should take a detailed history of vomiting such as the cycle of symptom formation, predisposing and the precipitating factors, the interval and the duration of the symptoms. The patient should have a thorough physical examination and investigations of the digestive and the nervous systems. If

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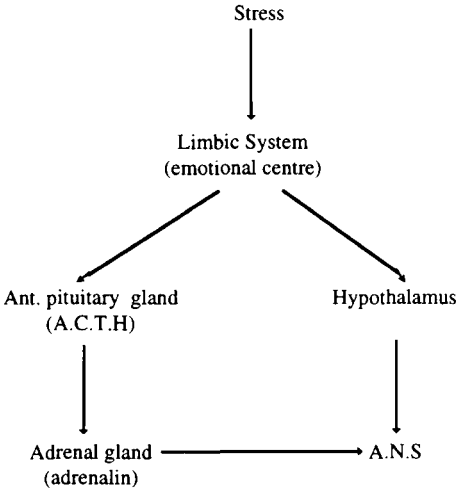
physical problems can be excluded, psychogenic vomiting should be considered[2,3].

When a child is ill, he will respond in two ways :-

1. Psychologically : The child feels uncomfortable, tense, stressed, worried and is always bad tempered

2. Physiologically : Stress will stimulate the limbic system (emotional centre) which causes dysfunction of many endocrine glands including anterior pituitary gland, adrenal gland and hypothalamus which have a close relationship with the autonomic nervous system (A.N.S) as shown in diagram 1[4].

Diagram 1 Biological theory of psychogenic vomiting.



Patient report

Six cases of chronic and severe vomiting were studied and treated as inpatients at Yuwaprasert Withayopathum Child Psychiatric Hospital from 1976-1981. Periodic follow-up was continued until 1996.

Table 1. Age of symptom onset and admission.

Sex (n=6)	Age (years, months) Onset	On admission
Male	1.4	2.1
(n=3)	5.0	8.1
	6.0	9.2
Female	6.0	7.4
(n=3)	2.6	9.0
	10.0	11.6
Average	5.1	7.8

Three of the six patients were boys and the other three were girls.

The youngest age of onset was a 1-year-4-month old boy and a 2-year-6-month old girl. The youngest age of admission at Yuwaprasart Waithayopathum Hospital was a 2-year-1-month old boy and a 7-year-4-month-old girl.

The oldest age of onset was a 6 year old boy and a 10 year old girl. The oldest age of admission at Yuwaprasart Waithayopathum Hospital was a 9- year-2-month old boy and an 11-year- 6- month old girl.

The average age of onset was 5- year-1-month old and the average age of admission at Yuwaprasart Waithayopathum Hospital was 7-year- 8- month old.

Table 2. Number of hospital admission and surgical operations.

Sex	Age (year, months)	No.of admission Gen. Hosp.	Child Psy. Hosp	Surgery
Male	2.1	6	1	expl. lap., -ve, 2 (appendectomy)
	8.1	5	3	-
	9.2	5	2	-
Female	7.4	>10	1	-
	9.4	4	1	expl. lap., -ve appendectomy
	11.6	7	3	expl. lap., -ve appendectomy

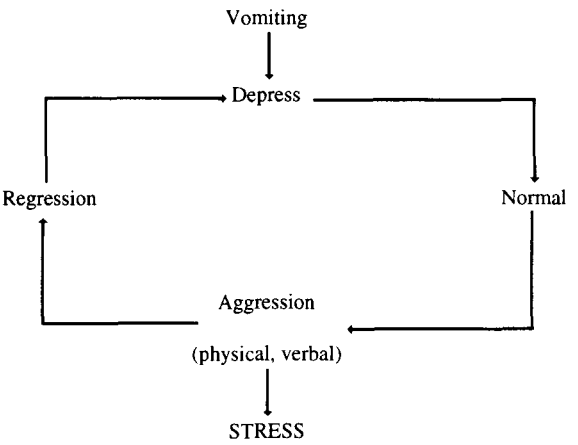
Of the six subjects, four were referred by child psychiatrists. All had previously been admitted and treated in general hospitals from four to over ten times. Three had undergone surgery, one of which was done in a foreign country. Vomiting was so violent that the GI series showed duodenal bulging due to severe spasm of the pyloric antrum. All three underwent exploratory laparotomy but no abnormality was found as the spasm of pyloric antrum disappeared under anaesthesia. Appendectomies were performed in all cases.

One subject (male) underwent surgery twice; the first was exploratory laparotomy with appendectomy, and two months later, removal of adhesion bands and a bypass were performed as vomiting had recurred and signs of intestinal obstruction were found. However, one month later, severe vomiting occurred again.

The vomiting was projectile in all cases, followed by severe thirst due to dehydration and electrolyte imbalance. Drinking too much water led to further attacks of vomiting, lasting for 4 - 7 days. The vomiting cycles occurred from once every 7 days to 2 months.

During vomiting, all cases had medical complications such as severe dehydration, severe glossitis, angular stomatitis, fever and abdominal pain. Furthermore, the first case formed a habit of toothpicking which was so severe that one could see his dental roots. It followed that this patient could not eat or drink as it was too painful. The patient was treated by a dentist who splinted and capped the teeth. The second case vomited severely for four days, stopped for seven days and started vomiting again, resulting in hematemesis. The third case vomited so violently that he went into shock each time.

Flow Chart 2 Cycle of symptom formation.



All cases had similar mental statuses; overt irritability and depression during vomiting attacks with marked cheerfulness, normal appetites and lifestyles after treatment. Whenever an external stimulus of stress (different for each case) came in, the child would become distressed, clinging irritably, easily angered, verbally and physically aggressive and would begin to regress to baby talk and behaviour. The vomiting would occur with depressive symptoms, forming a repetitive cycle of formation.

All patients were of school age from Grade 1 to 5 except the first patient, who was too young to attend school.

Investigations

IQ (WISC) ranged from 104-120.

All of the patients' upper GI series, performed during admission at YWH were within normal limit.

Table 3. Symptom intervals, duration and complications.

Sex	Age (years, months)	Vomiting (Days) Symptom Interval	Symptom Duration	Complications Physical	Psychological
Male	2.1	15	4-5	Tooth picking	↑
	8.1	7	4	Hematemesis	
	9.2	30-45	7	Shock	Aggression
					Regression
Female	7.4	30	7	Dehydration	Depression
	9.0	15-20	5-7	Severe	
	11.6	30-60	7	Glossitis	↓

Table 4. Birth order, education level, I.Q., and other investigation.

Sex	Age (year, months)	Birth order	Education (Primary school)	I.Q. WISC	EEG G.I.series
Male	2.1	BG	-	120	↑ ↑
	8.1	GB	3	104	| |
	9.2	BG	4	120	| |
					Normal
Female	7.4	GGGB	1	110	| |
	9.0	GGG	3	110	| |
	11.6	BGBB	5	109	↓ ↓

Table 5. Parental status.

Sex	Age (year, months)	Age		Education		Occupation		Marital status
		F	M	F	M	F	M	
Male	2.1	26	26	B.A.	B.A.	Government Official	Government Official	Married
	8.1	40	36	Vocational	Grade 4	Employee	Housewife	Married
	9.2	42	34	Vocational	Grade 4	Government Official	Hair-Dresser	Married
Female	7.4	30	27	Grade 4	Grade 4	Sale-business	Housewife	Divorced
	9.0	46	40	B.A.	B.A.	Government Official	Housewife	Married
	11.6	33	30	Grade 4	Grade 4	Unemployed	Employee	Married

Table 6. Predisposing and precipitating factors.

Sex	Age (year, month)	Predisposing factors		Precipitating factors
		F	M	
Male	2.1	Overdominant	Submissive	Sibling rivalry
	8.1	Over protective	Thyrotoxicosis Thyroidectomy	Tonsillectomy
	9.2	Alcoholic, abusive	Suicidal attempt	Learning failure
Female	7.4	Seperated	Severely depressed	Step father rejected
	9.0	Homosexual Pathological gambler	Severely depressed	Sex scene
	11.6	Alcoholic, abusive	Suicidal attempt	Separation anxiety

Electroencephalograms (10-20 system) were done twice for each patient and the results were all normal.

As for parental status, fathers' ages ranged from 26 - 46 years ; mothers' ages 26 - 40 years. Fathers' educational level included two grade fours, two vocational schools, one B.A. in education and one M.A. in education. As for mothers' educational level, four completed grade four, one had a B.A. in education and the other in arts.

Fathers' occupations included three governmental officials, one employee, one salesman and one unemployed.

Mothers' occupations consisted of one government official, one beauty salon owner, one employee and three housewives. Combined incomes ranged from two thousand to thirteen thousand baht per month. Five couples were still married and the sixth couple was divorced with the mother remarried.

Phychogenic vomiting is caused mainly because of emotional problems in the family. Typical history will show a tendency to vomit, to have stomach-aches from early childhood and even minor colds. Parents will comment that no matter what the child is sick with, it will go to the child's stomach and then vomiting and stomach-aches will ensue. The whole family becomes concerned and attentive to the vomiting symptoms. Therefore, the child unconsciously uses vomiting as a bargain in school refusal(5).

From this study, all six cases had severe family psychopathology as follows:

CASE REPORTS

Patient 1, a 2 - year - 3 month-old boy, with a history of vomiting tendencies since birth. Inconsistent upbringing with over dominant father and submissive mother. He was always a picky eater, vomiting whatever he disliked. Chronic vomiting began at one year four months.

During his mother's second pregnancy at 6 months, she had vaginal bleeding from low lying placenta. Doctor advised rest and no heavy weight lifting. She was afraid to hold him or pick him up. Whenever the patient ran to her, his father would pull him away. The patient's vomiting became more severe. After his sister was born, the patient showed extreme jealousy with such behaviour as hitting the baby's head. When scolded, he would cry and vomit. He was treated in a general hospital 6 times in 9 months and underwent surgery twice.

Pateint 2, an 8 - year - 1 - month-old boy, with a history of colic, vomiting after feeding and during flu which he caught so frequently that his tonsils became chronically inflamed.

The father was over protective while the mother had mixed anxiety and depression as well as thyrotoxicosis. The mother was advised to have surgical treatment. She was afraid of surgery and told the patient of her fears. After the patient's tonsillectomy when he was 5 years old, the mother forced the patient to open his mouth every day and said "Your tonsils have disappeared and so will my thyroid gland soon too". The patient began vomiting which became chronic and received treatment in a general hospital 5 times in 3 years 1 month.

The patient was sensitive, easily upset, tearful, feminine and over anxious. His sister had chronic headaches.

Pateint 3, a 9 - year - 2 month-old boy, with frequent vomiting since age 6. Frequent school refusal with stomach-aches, fever, and vomiting. Symptoms became more severe with failure to pass examinations.

The father had a history of severe alcoholism since his years in a vocational school until he became a chronic alcoholic at age 38. Whenever drunk, he physically and verbally abused the patient's mother in front of the patient. The mother could not tolerate this sadistic behavior and attempted suicide by drug overdose once. The mother confided her troubles to the patient and caused him to be very unhappy with death wishes for his father followed by guilty feelings leading to severe chronic vomiting. He was treated in a general hospital 5 times. Each time he went into shock.

The patient's sister had no symptoms as she had run away to live with her relatives.

Patient 4, a - 7 - year - 4 - month-old girl, with frequent vomiting beginning at age 6. She was treated in general hospitals more than 10 times in 1 year, 4 months.

The father had abandoned the mother at the patient's birth. The grandmother raised the patient and told her that all men were bad and selfish. The grandfather left the grandmother and the grandmother forbade the mother to get married. The mother did not listen and was abandoned by her father. The mother became severely depressed. The grandmother tried to keep the mother from remarrying and made the patient side with her. The mother remarried and got pregnant anyway. The grandmother said that the mother would be abandoned again, making the patient hate her stepfather and begin vomiting. During the initial part of the hospital stay, any mention of the step father caused immediate projectile vomiting.

Patient 5, a - 9 - year old girl, with onset of vomiting at 2 years, 6 months. She was treated in general hospitals 4 times in 6 years, 8 months, had undergone exploratory laparotomy and appendectomy in foreign countries with no abnormal findings.

The patient was the younger twin who had always felt inferior to the older twin in every aspect, development, learning and maturity. The mother was immature with anxiety and depression concerning the father.

The father was a homosexual and married the mother because he was in love with the mother's brother since they had met abroad. He married the mother to be close to his love object. Also the father was a pathological gambler with enormous debts. The mother confided in the children. Vomiting became more severe when the patient found out about the father. Both sisters had psychological problems. The older twin had psychosomatic symptoms of the skin, atopic dermatitis. The older sister had depression.

Patient 6, a 11 - year - 6 month-old girl, with chronic vomiting since 10 years old. The patient's family was very poor and she had to help with housework since early childhood. She was the only girl with 2 older brothers and one younger brother. She did all the housework and had to babysit her younger brother as well. The patient had frequent headaches and school refusal since 9 years old. The mother would buy OTC drugs and the symptoms would wax and wane.

Chronic vomiting began at 10 years and the patient was treated in general hospitals with IV fluids 7 times in 1 year 6 months. During the 7th admission, she underwent exploratory laparotomy and appendectomy with no abnormal findings. The father used to drive a passenger tricycle, but in the past two years could not work due to chronic alcoholism. He physically abused his wife and children with the exception of the patient. He felt sorry for her because she was weak. The mother did laundry for a living and had attempted suicide twice by drug overdose. The patient lived in constant fear that her mother would run away or commit suicide successfully.

Comments

Biological treatment alone is unlikely to be effective enough. If the parents and the patient himself can be made to understand that vomiting is psychogenic in origin, treatment results should improve. However, this problem is usually perceived by those involved as a severe physical disorder[6,7].

As for steps in treatment, the first step must be to save the patient's life by symptomatic treatment with fluids and electrolyte replacement. When the patient is stabilized, further necessary investigations such as upper GI series, EEG and psychological tests should be taken.

Mental status examination of the patient must be taken in detail for treatment plan. In the beginning, the patient must be temporarily separated from the family. After which, treatment includes both individual psychotherapy and family therapy of the patient, parents and all family members can be interviewed. When the patient ceases vomiting, continued therapy helps parents to maintain the understanding and the participation in helping the patient appropriately. Rehabilitation for the patient consists of group activities, sports, music, psychodrama as well as studying in special education classess at the hospital.

Chlorpromazine is an effective drug because it decreases vomiting in various dosages and duration according to each individual patient and severity of the disorder.

For the six subjects, dosage ranged from 40 - 400 mg/day or 2.5 - 15.4 mg/kg/day for a duration range of 4 - 25 months. Tapering off was done when symptoms had improved, which was from 2 - 34 months.

Table 7. Intervention : type, drug dosage and duration.

Sex	Age (year, month)	Chlorpromazine (CPZ)				Others
		mg/kg/d	total dose/d.	fulldose	Duration (months) Tapering	
Male	2.1	2.5	40	25	8	All
	8.1	15.4	400	22	34	- Symptomatic treatment
	9.2	3.0	100	15	7	- Psychotherapy individusl family
Female	7.4	6.6	100	9	19	- Special class learning
	9.0*	4.1	100	10	2	
	11.6	8.0	200	4	5	

* Moved to foreign country

Amitriptyline was used in subjects over 8 years old during depressive attacks. Dosages ranged from 10 - 25 mg/day and were used for short periods.

Table 8. Treatment results.

Sex	Age (yr.)	Result
Male	18	High school
	26	BA Graduate - employed
	24	Vocational school - employed
Female	26	6th grade - married
	24	living abroad
	25	6th grade - employed

Treatment results (20 years follow-up)

Chronic vomiting ceased in all cases with no recurrent symptoms, ranging from 2 months to 3 years. All of them attended the out patient clinic 3 - 4 times a year and they functioned very well in society without any medication.

Presently, patient 1, male, is 18 years old in high school. Patient 2, male is 26, a BA graduate and presently employed. Patient 3, male is 24, finished vocational school and employed. Patient 4, female is 26, finished 6th grade, married and living in the country. Patient 5, female is 24, living abroad and patient 6, female is 25, finished 6th grade and is employed

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REFERENCES

1. Lawrence DW, Renate HR, William LW. Psychogenic Vomiting, A Review. Am J Gastroenterol 1982; 77: 318-21.
2. Hanson JS, Mc Callum RW. The diagnosis and management of nausea and vomiting : A review. Am J Gastroenterol 1985; 80: 210-8.
3. Malagelada JR, Camilleri M. Unexplained vomiting : A diagnostic challenge. Ann Intern Med 1984; 101: 221-18.
4. Boonyaprakob V, Limsuwan N, Su-ampun U. Psychophysiological disorders. Child Psychiatry for Pediatricians. Bangkok : Chuanpim 1987: 198-200.
5. Embry CK. Toxic cyclic vomiting in an 11 year old girl. Am J Acad Child Adolesc Psychiatry 1987; 26: 447-86.
6. Magagna J. Psychophysiologic treatment of cyclic vomiting. [Review] [10 refs]. J of Pediatric Gastroenterol & Nutrition. 1995; 21 Suppl 1 : S 31-6.
7. Kreipe RE. Eating disorders among children and adolescents, Pediatrics in Review 1995; 16: 370-9.

อาเจียนจากจิต 2519 – 2525 ติดตามผลรักษาถึง 2539†

*เพ็ญแข ลิ่มศิลา, พ.บ.**

ระหว่างปี พ.ศ. 2519-2525 โรงพยาบาลยุวประสาทไวทโยปถัมภ์ ได้รับเด็กผู้ป่วยที่มีอาการอาเจียนเรื้อรังอย่างรุนแรงซึ่งมีสาเหตุจากจิตใจ รวม 6 ราย ไว้รักษาในแผนกผู้ป่วยในของโรงพยาบาล เด็กผู้ป่วยทุกรายเคยได้รับการรักษาในโรงพยาบาลทั่วไปทางฝ่ายกายมาแล้วตั้งแต่ 4 ครั้ง ถึงมากกว่า 10 ครั้ง เนื่องจากมีอาการแทรกซ้อนจากการอาเจียนรุนแรง คือร่างกายขาดน้ำอย่างมาก มีเด็กผู้ป่วย 3 ราย ได้รับการรักษาด้วยการผ่าตัดทางช่องท้องโดยกุมารศัลยแพทย์ แต่ไม่พบสิ่งที่ผิดปกติเลย การรักษาเด็กผู้ป่วยในโรงพยาบาลยุวประสาทไวทโยปถัมภ์ประกอบด้วย การรักษาตามอาการและอาการแทรกซ้อน การให้ยา การทำจิตบำบัดรายบุคคล พฤติกรรมบำบัด การฟื้นฟูสมรรถภาพ กิจกรรมบำบัด การจัดให้เด็กได้เรียนในชั้นการศึกษาพิเศษของโรงพยาบาลและการทำจิตบำบัดครอบครัว

ได้ติดตามผลการรักษาถึงปี พ.ศ. 2539 (20 ปี) พบว่า ผู้ป่วย 5 ราย ไม่มีการอาเจียนอีกเลยโดยงดยาได้ทั้งหมด ยกเว้นผู้ป่วยหญิง 1 ราย ซึ่งย้ายตามครอบครัวไปอยู่ต่างประเทศ

* โรงพยาบาลยุวประสาทไวทโยปถัมภ์ ในพระอุปถัมภ์ สมเด็จพระเจ้าพี่นางเธอ เจ้าฟ้ากัลยาณิวัฒนา กรมหลวงนราธิวาสราชนครินทร์ จังหวัดสมุทรปราการ 10270

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