

Sally Longstaffe

Maternal Deprivation Masking As Mental Retardation In Children

SUMMARY

A child with delayed development and behavioral abnormalities presents a clinical challenge to the physician caring for children. Understanding of normal milestones and behavior, and the importance of the environment are necessary in making an accurate diagnosis and planning treatment. Maternal

deprivation may produce a picture that initially suggests mild mental retardation. Differentiation is possible by a closer look at the child's developmental and behavioral characteristics and some associated specific physical features. (Can Fam Physician 25:1365-1367, 1979).

Dr. Longstaffe is assistant professor of pediatrics at the University of Manitoba. Reprint requests to: Children's Clinic, 685 Bannatyne Avenue, Winnipeg, MB. R3E 0W1.

WHENEVER AN INFANT or child presents with behavior that is less than age-appropriate, the question arises as to whether this reflects an innate limitation of potential, from either a static or progressive lesion, or whether some environmental influence is operating to hamper progress. The most important and frequent of these outside influences is a less than optimal maternal-infant relationship. Such a differentiation is crucial, since the effects of an abnormal mother-child relationship are often largely reversible.

Maternal deprivation implies that a mother is unable to provide for her child's needs. Its effects are seen in two ways:

1. *Understimulation*: certain developmental defects occur as a result of inadequate and infrequent physical handling of the infant. This may result in delays in language and motor development, with motor milestones being missed.

2. *An inadequate or inconsistent one to one relationship*: as a result of a mother's inability to focus on her baby the normal process of psychological

bonding with the infant does not occur adequately. The infant fails to develop a trusting dependency on one adult figure and later sequelae often occur in behavior and emotional responses.

The 'pseudoretardation' associated with maternal deprivation is a now frequently recognized phenomenon in children, and one which has associated clinical features making recognition easier.

Types of Maternal-Infant Relationships

Looking at the maternal-infant duo, many types of relationships may exist which have profound effects on the child, from the healthy relationship with a caring and nurturing mother to several other pathological types of bonds. These are each clinically distinct and tend to have differing effects on the infant's development and mental wellbeing. It is important to be able to recognize the clinical differences in this spectrum of behavior. In each case, the infant's own personality characteristics cause a "feedback" type of effect on the mother's responses to him or her.

Pathological Maternal Responses

Several pathological types of maternal responses may occur:

1. A mother may be basically caring,

but providing poorly for the physical needs of the child, perhaps also allowing injuries or illnesses to occur because of lack of supervision.

2. A mother may behave in an overtly rejecting way toward the child.

3. Physically abusive mothers, in general, tend to have a meaningful love for their child, but there is with it a desperate searching quality wherein the infant is forced to shoulder the responsibility of nurturing a needy and unfulfilled parent. Failure to comply or succeed in this monumental task may then lead to physical abuse.

The term 'maternal (or emotional) deprivation' has been used loosely in the past, but is generally accepted now as being the lack of a continuous emotional tie with a single caring adult. Deprived infants have frequently been exposed to a series of transient and shallow relationships with a variety of mothering figures in their lives. In the past this was most frequently found in children raised in orphanages, but presently, in children who have been in a succession of short-term foster placements.

Sequelae of Maternal Deprivation

Many studies in the last four decades have looked at the results and reversibility of an emotionally depriving experience.¹⁻⁴ Varying degrees of intellectual and emotional deficits will

ensue after a period of deprivation. Though the intellectual deficits are often reversible, the child may be left with a legacy of emotional difficulties which may remain months and sometimes years after placement in a more satisfactory environment.

The effects are somewhat different in the first year of life than subsequently. Tables 1 and 2 show some of the physical signs and symptoms as well as the developmental and behavioral signs which may assist in the diagnosis of emotional deprivation.

TABLE 1

Emotional Deprivation in the First Year of Life: Signs and Symptoms Which May be Associated

PHYSICAL

poor weight gain, hypotonia, refusal to bear weight, occasionally regurgitation of feeds

DEVELOPMENTAL

delayed acquisition of words, "opting out" in developmental testing, "hot potato" grasp of toys which are immediately dropped again—sometimes hand flapping

BEHAVIORAL

silent, watchful, sober behavior, disinterest in toys, sometimes autoerotic behavior, especially rocking when left alone, sometimes sleep disturbances

TABLE 2

Emotional Deprivation in the Older Child: Signs and Symptoms Which May be Associated

PHYSICAL

may be small stature (deprivation dwarfism), may be pot belly, wasting, may be a secondary lack of growth hormone

DEVELOPMENTAL

distractible in play, short attention span, impulse control poor, language deficits, overactivity in groups (better on one-to-one basis)

BEHAVIORAL

mechanical overeating (not associated with hunger), may include garbage, food hoarding; sometimes destructive behavior, insatiable need for attention, at times aggression to animals, fire setting, stealing, poor frustration tolerance, inability to develop meaningful relationships, indiscriminate social responses to familiar and strange people

Both during the first year of life and later, the child may perform poorly on developmental tests, the infant frequently having poor attention and interest in play materials, delayed motor development, and slow acquisition of words. The older child may be difficult to assess developmentally because of difficulties with impulse control in play, overactive and aggressive behavior, and infantile speech development. Mental retardation could be an initial clinical suspicion. In these circumstances a dramatic change in affect and behavior accompanied by a rapid spurt in development generally accompanies placement in more nurturing surroundings.

Case Histories

Two case histories are presented here—the first, R.D., a child with a short experience of deprivation and a favorable outcome. The second case, on the other hand, C.L., demonstrates some serious and difficult sequelae after a long period of intense deprivation associated with maternal rejection and abuse.

Case I

R.D.,
B.D. January 22, 1977

Admitting Diagnosis—Failure to thrive. Admitted to Winnipeg Health Sciences Children's Centre
Age: 16 months.

History

—included previous slow weight gain in spite of a reportedly normal intake, no other illnesses except a mild iron deficiency anemia. The baby was born fullterm after a normal pregnancy, birth weight 2.8 kg.

Family History

Longterm marital strife; maternal obesity, depression, and low self-esteem. The infant's mother was found to have spent most of the daytime hours in bed almost since the baby's birth, rising only to provide him with necessary physical care. The baby's father was suffering from emotional difficulties, and was not playing any meaningful role in the baby's care.

Admission Physical Exam

A pale listless baby, weight and head circumference below 3rd percentile for age; length falling on 25th percentile (having fallen from 75th percentile); hypotonia of lower limbs with normal symmetric deep tendon re-

flexes; refusal to bear weight; developmentally at a 13 month level (chronologic age 16 months); immobile and watchful when presented with toys; sober affect even when ball play attempted; no vocalizations.

Course in Hospital

While in hospital gained weight (ten days); hemoglobin, urine cultures, intravenous pyelogram, and biochemistry all normal; bone age two standard deviations below chronologic age. Mother relinquished baby temporarily to local Child Protection Agency (Children's Aid of Winnipeg).

Later Course and Treatment

Intensive support and education program for mother; medical care for mother; marital counselling; specialized foster placement for baby with gradually increasing contact with mother; parents separated; child eventually returned home with day care and close social work and medical supervision.

Currently (age 2½ years) child is developmentally and behaviorally normal with a healthy interaction with his mother.

Case 2

C.L.,
B.D. June 30, 1972

Seen in Children's Clinic, Health Sciences Children's Centre on multiple occasions with increasing concerns about poor care and supervision at home. Previous short term apprehensions necessary because of "multiple bruises" of unknown origin, and desertion by mother; known to have problem with enuresis, encopresis, hyperactivity and severe temper tantrums. Apprehended by Child Protection Agency November 1977 and has remained in care since. At the time of apprehension appeared emaciated and filthy with ragged clothes while her mother was dressed fashionably; scattered bruises present.

Maternal History

Background disruptive with alcoholic parents, punitive handling in her childhood; early marriage then separation after physical abuse by husband; mild mental retardation present; diagnosed as having manic depressive psychosis.

Initial Problems with Child in Foster Home

A socially indiscriminate little girl;

severe problems with aggressive, overactive and destructive behavior; abusive toward pets; frequent soiling and wetting; compulsive overeating to the point of vomiting. Developmentally delayed two years.

Child has remained in the same foster home in a supportive, consistent and warm environment for almost two years. Gradual development of ties with foster mother and spurt in development.

Currently

Continues to be mildly developmentally delayed; much of previous behavior settled; continues to be attention seeking and "silly" in groups and to react to any discipline by reverting to infantile behavior.

Intervention

The primary goal of therapy for a deprived child must be provision of some single person who can give appropriate nurturing and support on a longterm basis. This may be possible with one or other of the natural parents or some other person in the extended family. Alternatively a longterm foster placement or adoptive placement can provide appropriately for the child. Progress is often slow, especially after a long period of intense deprivation. The parenting figure will usually require a great deal of support and interpretation of behavior over a period of months.

Thus maternal deprivation, though initially presenting a picture that may be confusingly like mental retardation, has many specific features to allow accurate differentiation.

Therapy for an emotionally deprived child is a distinct possibility, making early clinical recognition crucial. ●

References

1. Balby J: *Maternal Care and Mental Health. Monograph No. 2. Geneva, World Health Organization, 1952.*
2. Goldfarb W: *Effects of early institutional care on adolescent personality. J Exp Educ 12:106-129, 1943.*
3. Taylor A: *Deprived infants: Potential for affective adjustment. Am J Orthop 28:835-845, 1968.*
4. Beres D, Obers S: *The effects of extreme deprivation in infancy on psychic structure in adolescence. Psychoanalytic Study of The Child 5:212-235, 1950.*

Dalmane Roche

Rx Summary

Indications

Insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening. Effective for short-term and intermittent use in patients with recurring insomnia or poor sleeping habits; safety and efficacy for long-term use has not been established.

Contraindications

Known hypersensitivity to 'Dalmane' and in children under 15 years.

Warnings

Safety in women who are or who may become pregnant has not been established; give only when potential benefits have been weighed against possible hazard to mother and fetus.

Precautions

In elderly or debilitated patients: Limit initial dosage to 15 mg to preclude possible oversedation, dizziness and/or ataxia.
In emotional disorders: Use with caution in severely depressed patients or those with evidence of latent depression; with particular recognition that suicidal tendencies may be present and protective measures may be necessary.
Potentiation of drug effects: Advise patients against simultaneous ingestion of alcohol or other central nervous system depressants during 'Dalmane' therapy.
Physical and psychological dependence: Exercise caution when administering to patients who may increase dosage on their own accord. Caution patients to proceed cautiously whenever mental alertness or physical coordination may be necessary shortly after ingestion of 'Dalmane'. If 'Dalmane' is used repeatedly, periodic blood counts and liver and kidney function tests may be advisable. Use with caution in patients with impaired renal or hepatic function.

Adverse effects

Most common are dizziness, drowsiness, light-headedness and ataxia, particularly in the elderly or debilitated (see Precautions.)
Rare reports of blood dyscrasias and visual, gastrointestinal, respiratory and cardiovascular disturbances, and paradoxical reactions. See monograph for complete list of reported adverse reactions.

Dosage

Individualized for maximum beneficial effects. Usual adult dose is 30 mg before retiring.
In elderly or debilitated, initiate therapy with 15 mg until individual responses are determined.

Supply

Ivory/orange capsules imprinted ROCHE C and DALMANE 15 (black ink) alternating between body and cap, each containing 15 mg flurazepam HCl.
Ivory/red capsules imprinted ROCHE C and DALMANE 30 (black ink) alternating between body and cap, each containing 30 mg flurazepam HCl.
Bottles of 100 and 500.
Unit dose, boxes of 100.

Product monograph available on request.

® Reg. Trade Mark

References:

1. Kales, A., et al, *J. Clin. Pharm.*, 17:207, 1977.
2. Kales, A., et al, *Clin. Pharmacol. Ther.*, 18:356, 1975.
3. Kales, A., Scharf, M.B., *The Benzodiazepines*, Raven Press, 587, 1973.
4. Dement, W.C., et al, *The Benzodiazepines*, Raven Press, 599, 1973.



Hoffmann-La Roche Limited
Vaudreuil, Québec
J7V 6B3

Can. 8075

Rx Summary

Gantanol®

(sulfamethoxazole 'Roche')

Indications

Urogenital infections (cystitis, prostatitis, pyelitis and urethritis) and soft tissue infections, due to sulfonamide sensitive organisms.

Contraindications

Sensitivity to sulfonamides.
Severe liver damage; pregnancy at term and during the nursing period or in newborn or premature infants during the first few weeks of life.

Precautions

Perform blood counts during prolonged therapy; discontinue therapy on signs of headache, nausea, vomiting, urticaria, rash, fever or hematuria. With caution in patients with impaired renal or liver function.

Adverse reactions

Discontinue therapy on the appearance of one or more of the following adverse reactions:
■ Blood dyscrasias: agranulocytosis, aplastic or hemolytic anemia, thrombocytopenia, hypoprothrombinemia, leukopenia, purpura or methemoglobinemia.
■ Allergic reactions: generalized skin eruptions, urticaria, pruritus, epidermal necrolysis, erythema multiforme, exfoliative dermatitis or other possible allergic reactions.
■ Gastrointestinal: nausea, vomiting, abdominal pain, diarrhea, anorexia, pancreatitis, stomatitis or hepatitis.
■ Central nervous system: headache, ataxia, hallucinations, vertigo, tinnitus.

Dosage

Adults: 2 g initially, then 1 g every 12 hours.
Children: 50 to 60 mg/kg initially, then 25 to 30 mg/kg every 12 hours.
In severe infections, maintenance dose may be given three times daily.
Continue therapy for 5 to 7 days or until patient is asymptomatic for 48 hours.

Supply

Pale green, cylindrical, biplane tablet, ROCHE engraved on one face, cross-scored on other with C in upper right and lower left quadrant; contains sulfamethoxazole - 500 mg. Bottles of 100 and 500.
Cherry flavoured suspension containing sulfamethoxazole - 500 mg/5 ml. Bottles of 100 and 400 ml.

'Gantanol' Duplex Pack

Containing 28 tablets 'Gantanol' and 14 tablets 'Uro Gantanol'.

Uro Gantanol®

(sulfamethoxazole/phenazopyridine HCl 'Roche')

Indications

Urogenital infections (cystitis, prostatitis, pyelitis and urethritis), particularly those where pain exists.

Contraindications

Sensitivity to sulfonamides or phenazopyridine.
Severe liver damage; pregnancy at term and during the nursing period or in newborn or premature infants during the first few weeks of life.
Phenazopyridine is contraindicated in glomerular nephritis, pyelonephritis, uremia and severe hepatitis with gastrointestinal disturbances.

Precautions

Perform blood counts during prolonged therapy; discontinue therapy on signs of headache, nausea, vomiting, urticaria, rash, fever or hematuria. With caution in patients with impaired renal or liver function.

Adverse reactions

Discontinue therapy on the appearance of one or more of the following adverse reactions:
■ Blood dyscrasias: agranulocytosis, aplastic or hemolytic anemia, thrombocytopenia, hypoprothrombinemia, leukopenia, purpura or methemoglobinemia.
■ Allergic reactions: generalized skin eruptions, urticaria, pruritus, epidermal necrolysis, erythema multiforme, exfoliative dermatitis or other possible allergic reactions.
■ Gastrointestinal: nausea, vomiting, abdominal pain, diarrhea, anorexia, pancreatitis, stomatitis or hepatitis.
■ Central nervous system: headache, ataxia, hallucinations, vertigo, tinnitus.

Dosage

Adults: 4 tablets initially, then 2 tablets every 12 hours.
Children (up to 36 kg): 2 tablets per 18 kg body weight initially, then 1 tablet per 18 kg body weight every 12 hours.

After relief of pain, continued treatment with 'Gantanol' may be considered.
Note: Phenazopyridine will colour urine orange-red.

Supply

Red, cylindrical, biconvex, film-coated tablet, engraved Roche II; contains sulfamethoxazole - 500 mg, and phenazopyridine HCl - 100 mg. Bottles of 100 and 500.

Complete prescribing information available on request.



Hoffmann-La Roche Limited
Vaudreuil, Québec J7V 6B3

® Reg. Trade Mark