

Treatment

Cough swabs and, if possible, sputum should be examined bacteriologically in all cases, but most attacks of acute wheezing in infancy and childhood do not require antibiotic treatment (Phelan & Stocks 1974). Sputum appearing purulent may be due, not to infection, but to large numbers of eosinophils (Altounyan 1970). Fever and a leukocytosis do not necessarily indicate infection in acute wheezing (Simpson 1973). Sinusitis, otitis media or bacterial tonsillitis occurring in a wheezy child merits treatment with antibiotics in its own right. Other indications for antibiotics include a chest X-ray with segmental areas of consolidation suggesting pneumonia, or lobar collapse. Subsegmental areas of collapse/consolidation on a chest X-ray are not necessarily indications for antibiotics (Simpson *et al.* 1974).

For severe bronchospasm managed in hospital, many would use antibiotics as secondary bacterial infection usually cannot be excluded. However, pneumonitis has occurred in 12 of 24 childhood asthma deaths in spite of antibiotic therapy in 10 of them (Richards & Patrick 1965). Excessive sedation, inadequate rehydration and overdosage with aminophylline probably played a part in many of the deaths. These authors advised against the routine use of antibiotics in children with asthma and status asthmaticus. If antibiotics are to be used, a combination of methicillin and gentamicin below 1 year and ampicillin above that age seem suitable (Phelan & Stocks 1974).

Prevention

Breast-feeding protects against RS virus infection in infancy (Downham *et al.* 1976). Measures to remedy overcrowding and high unemployment might reduce the risk of wheezing, at least in infancy (Sims *et al.* 1976), as might a reduction in the number of parents who smoke (Harlap & Davies 1974). Virus cross-infection in hospital exposes infants and young children to attacks of wheezing, and measures to try to reduce this risk have been suggested (Sims *et al.* 1975).

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Emotional considerations in wheezy children

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Wheezy children suffer from a primary organic problem. Their wheezing is not caused psychologically, they are not necessarily psychologically disturbed, nor can psychiatrists cure

the primary condition. The emotional component, whilst secondary, is nevertheless of considerable importance. In order to understand the relevance of emotional factors, it is helpful to use childhood asthma as a model; there are four tiers, all of which can interact: (1) physiological substrate; (2) external environment; (3) child's internal state; (4) family reaction.

Physiological substrate

In asthma this is the labile bronchus.

External environment

Factors that may precipitate bronchospasm are: exercise; allergens; infection; emotional arousal. It is well recognized (Mattson 1975) that asthmatic children, when exposed to any of these precipitants, may develop bronchospasm on one occasion but not on another. It seems reasonable to postulate that there is an interaction between two or more of these factors. Emotional arousal, or stress, which is not always recognized by the child's parents or doctor, may take the form of anger, fear, sadness, excitement, boredom, envy or frustration. The evidence for emotional arousal as a precipitant of wheezing, or an asthma attack, has been comprehensively reviewed by Pilling (1975).

Child's internal state

Personality: There is no evidence to suggest that any particular personality type prevails amongst asthmatic children (Khan 1973), although it has been shown that they may be divided into rapid-remitters (on removal from stress) and non-remitters. The former type react more readily with bronchospasm to stress (Purcell *et al.* 1969). Williams (1975) has demonstrated that there is a greater degree of dependence-independence conflict in children with asthma than in normal children or those with cystic fibrosis.

Suggestibility: The power of suggestion has been demonstrated by various studies. Luparello *et al.* (1968) discovered that many asthmatic children developed bronchospasm after inhalation of a placebo, having previously been told that the solution contained a substance to which they knew themselves to be allergic. The bronchospasm was relieved by inhalation of the same substance after the children were told that it contained a bronchodilator of known efficacy. A similar experiment was carried out by Godfrey & Silverman (1973) using a placebo for the prevention of exercise-induced asthma, with similar results.

Attitude to illness: Attitudes may range from extreme over-acceptance and giving in to the illness to total denial – those children with the worst asthma seeming to be at one or other end of the spectrum, whilst those with the milder asthma having a more realistic attitude. Fear of death, suffering, parental anger or rejection, may contribute to the emotional arousal.

Internal conflicts: The child may experience conflict over missed schooling with subsequent educational problems that can attenuate recovery. Minuchin *et al.* (1975) have described a pattern of family interaction in which the asthmatic child finds himself in the middle of parental conflict, with an asthma attack as his only escape.

Family reactions

Attitudes may vary along a spectrum similar to that of the child. Family members may be over-protective, fussing over the slightest symptom and generally over-cosseting him, according many privileges and no discipline; or they may be hostile and rejecting, claiming that the child is manipulating his attacks. Some parents find the asthma so frightening that they behave as if it does not exist. Their fear is that if they show their anxieties then the wheezing will get worse. Such denying parents find it difficult even to comfort the child in bronchospasm. The attitudes of various family members may differ, and even the same person may fluctuate across the spectrum. Pinkerton (1971) has described in detail the parental-attitude spectrum and its importance.

Guilt, fear, anger and resentment may all be experienced by family members, and thus contribute to an intense whirlpool of emotions. Neglected siblings can express pleasure at their

rival's suffering. Occasionally the genuineness of the wheezing may be questioned, and the parents find themselves in a state of guilt-laden uncertainty.

Fear of possible death is very common, and often affects all family members. More often it is hinted at without being expressed openly. The failure to acknowledge such a fear is likely to exaggerate it.

An attitude spectrum to doctors also exists. Some parents are overdependent upon medical advice and others feel let down by their doctor who has failed to 'cure' their child. Similar attitudes exist towards medication. It is helpful to recognize the more extreme attitudes because they may play a part in determining the effectiveness or otherwise of therapeutic endeavours.

The peripheral father is a significant and 'familiar' figure in that he is rarely present at home, or at the clinic. His relationship to the family is peripheral, and the asthmatic child may discover that the only way of gaining his father's attention is by wheezing.

All the factors outlined above can have a significant effect on the course of the asthma, by setting up a circular system involving a progressive sequence of events which may lead to clinically intractable asthma, as well as intense emotional distress (Figure 1). That the family plays such an important role has been shown in various studies (Purcell *et al.* 1969, Mason 1970, Mattson 1975).

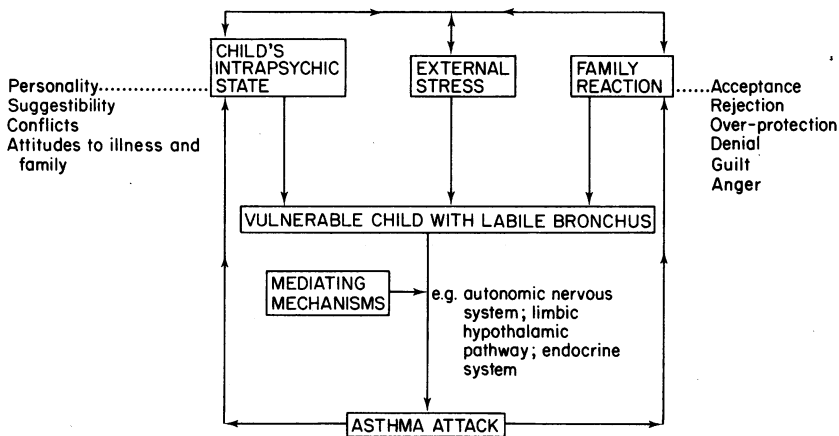


Figure 1. Family interactional system

Management

Claims have been made for the efficacy of virtually every psychological form of treatment. These have been critically reviewed by Mattson (1975), and as yet there is no evidence to show that any one method is superior to another. From the model described here it would seem reasonable to argue that recognizing and resolving the tensions within the asthmatic child and his family is an important aspect of the management of the child.

Family therapy is based on the theory that symptoms in an individual member of a family are often an expression of disturbed interaction within the family system and that the family as a whole should be the patient (Black 1976). Liebman *et al.* (1974) have described the successful use of family therapy for intractable childhood asthma, whilst a controlled trial of family therapy has recently been completed (Lask & Matthew 1979) with promising results.

Treatment consists of meeting the whole family and attempting to formulate an understanding of the family interactional patterns. Active exploration and discussion of these may lead to a relevant focus upon which therapy can be concentrated. The most common goals are: (1) promoting more realistic attitudes within the family, e.g. giving the parents permission to do

things they fear such as comforting, allowing freedom, or disciplining; (2) expression of suppressed emotions, especially the fear of death, and resentment towards the sick child; (3) resolution of marital problems, which are often detoured via the sick child; (4) the involvement of a peripheral father, and the reduced involvement of an overprotective mother.

The therapist acts as a catalyst for family interaction and helps the family to see the ways in which it functions in relation not only to the asthma, but also to everyday life. He will observe for episodes of wheezing in the treatment session and help the family understand their origin. He may ask the family to perform an 'action-replay' of the time at home when an asthma attack 'came on out of the blue', so that he can help unravel the complex emotional interactions. He will help the family to alter their inappropriate behaviour and management, and reinforce that which is appropriate, aiming to increase the family's confidence in their ability to avoid potential precipitants, and to reduce the frequency and intensity of attacks.

Referral for family assessment and perhaps therapy is indicated in any of the following situations: (1) when emotional factors seem to be playing a significant part; (2) when the asthmatic child is manifesting emotional, or behavioural problems seemingly unrelated to the asthma; (3) when there is evidence of family psychopathology; (4) when the asthma is not being reasonably well controlled with conventional methods of management.

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