Summary

The endoscopic appearance of the extrapleural pneumothorax in which post-operative haemorrhage has occurred is described.

A constant finding has been the presence of cones of blood clot arising from the chest wall.

These cones are sometimes free, sometimes fixed to the lung.

It is suggested that in some cases organization and contraction of these cones may be a factor in producing obliteration of the pneumothorax space.

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ASTHMA IN CHILDHOOD**A DISCUSSION OF THE PSYCHOLOGICAL ASPECT**

BY

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Although an association between nervous factors and bronchial asthma has been commented upon from time to time for more than a century, it is only within recent years that any serious attention has been paid to this aspect of the latter disorder. Dejerine and Gauckler (1915), writing of the effect of emotion upon the respirations, described cases of what they termed "nervous pseudo-asthma" which responded to treatment by reassurance. Ziegler and Elliott (1926) considered that the relation between the emotions and asthmatic attacks warranted careful study in that psychic stimuli seemed capable of inducing bronchial asthma in certain people with no history of protein sensitivity. Hurst (1929) thought that the most common psychological factor in asthma was expectation of an attack in certain places and under certain conditions, and attributed the fact that some 75 per cent. of patients are relieved directly they enter a hospital to the expectation of benefit from the treatment they are about to receive. In relation to this he stresses the importance of instilling into asthmatics a spirit of optimism as regards the ultimate outcome of their case. Rogerson, Hardcastle, and Duguid (1935) remarked upon the occurrence of asthma in over-protected children, and regarded the benefit derived from convalescent treatment as being attributable to the removal of the child from the difficult home environment. Gillespie (1936) considered asthma as being a mode of reaction of certain individuals to a variety of stimuli which might be of either a physical or a psychological order, and concluded that psychological factors might be equipotent with, replace, or be additional to physical factors in producing both asthma and asthmatic attacks. Bray (1937) regarded the psychic trauma as the trigger that fired the already loaded allergic gun, and considered that psychological treatment might help the patient suffering from allergic disorders by attending to his personal difficulties or his environmental stresses.

Strauss (1937), as a result of a detailed investigation of thirty unselected cases of asthma in adults, concluded that, even in the presence of the allergic diathesis, psychic factors contribute to the asthma syndrome in greater measure than had previously been thought likely, and held that psychotherapy, in the widest sense of the term, should reinforce physical methods of treatment. A

similar view was expressed in the Asthma Research Council's Report for 1938. McGregor (1938) considered that there is probably no such thing as a pure type of asthma, but that allergic, toxic, and psychogenic factors, among others, all play a part. He believed, however, that emotion occupied a prominent position in the structure of asthma and urged the introduction of these views into the approach to treatment. Pearson (1938) stressed the frequency with which over-anxiety, timidity, and lack of self-confidence are encountered as character traits of asthmatic children and the necessity for treating these and the environmental circumstances contributing to them. He also stressed the importance of preventing the patient from becoming a slave to his asthma. Boland (1938) issued a timely warning against attributing improvement to some special form of treatment when it might just as readily be due to chance, change of season, or mere passage of time. There are, however, recognized authorities who pay but scant attention to psychogenic factors in discussing the aetiology of asthma, as, for example, Coke (1939), who prefers "materialistic explanations to psychological theorems." It is also of interest that in a recent publication covering the ground of child psychiatry (Gordon, 1939) no reference is made to asthmatic states in childhood.

Study of a Series of Cases

During the past two years detailed study has been made of a series of cases of asthma in childhood with a view to determining the significance of psychological factors in the aetiology of this disorder and the contribution that psychological methods of treatment might have to offer. In that they were referred by medical practitioners for psychological investigation they were selected cases. In some of them physical factors were felt to be mainly responsible for the state of ill-health, and psychological treatment was not therefore recommended. In others, although the patients were subject to asthmatic attacks, advice was being sought primarily on account of other symptoms, such as those of a conduct disorder. In a third group psychological factors were considered to be contributing to the patients' condition, but full co-operation of the parents in carrying out the recommended plan of treatment was not obtainable. In a definite proportion of the cases, however, asthma was the primary symptom for which advice was sought, psychological factors were considered to be of significance, and the full co-operation of the parents, or in the case of adolescents of the patients themselves, was obtained. Five cases representative of this group have been chosen for detailed description, and have the following characteristics in common: (1) Asthma was the principal symptom for which advice was sought. (2) The symptom had been present for at least three years. (3) The patient was incapacitated by the attacks—in one case with respect to ability to follow an occupation, in four cases concerning ability to attend school with any degree of regularity, and, in all, as regards ability to enjoy the normal physical and pleasurable activities of childhood.

Case I

A girl aged 11½; an only child. Her maternal grandmother was subject to eczema: no other relevant family history was obtained. The father was of a worrying disposition and had not attempted to conceal his anxiety from the child, whom he coddled. "Have you coughed to-day?" was his usual greeting when he returned from his place of business. The mother stated that she had been very unhappy during the patient's early childhood owing to the attitude of her husband's people, who lived near by. The maternal grandmother resided in the home. The child had been healthy at birth but liable to eczema from infancy. At 3 years of age she suffered an

attack of bronchitis followed by asthma, which had persisted. She had been liable to recurrent coughs and colds. Tonsils and adenoids had been removed. Investigations as a hospital in-patient, including x-ray examination of the chest, had revealed no evidence of organic disease. When 10 years old oxyuriasis had been diagnosed by her practitioner, and treated. The asthmatic attacks had averaged one in four weeks, but had tended to become less frequent, the child being free from asthma for six months at 10½ years of age. An attack had occurred six weeks before being seen. She had missed a great deal of schooling and could not attend parties, visit the seaside, or experience any excitement without ill effect. She was taking a much restricted diet, was limited as regards physical activities, was said to be excitable and over-anxious and to worry unduly over tests and examinations. She was described as serious-minded, over-conscientious, fastidious about her appearance, and punctilious over her belongings. She was gifted in art and music, and was said to play the piano and organ and to sing well. It had been observed that her health was invariably less satisfactory when she was on holiday with her father. On examination in the month of August there were signs of bronchitis. The child was of small stature and slight build, and was considerably below the average weight for her age. The intelligence quotient was 115. She was observed to be unusually precocious, prim, and sedate. Psychological factors, both personal and environmental, were considered to be contributing to the condition. Treatment by psychological methods of approach was undertaken and the full co-operation of the parents and child obtained. One month later the parents reported that for the first time the child had enjoyed a seaside holiday in which she had been able to accompany them everywhere without ill effect. After five months she had been in regular attendance at school, had attended Christmas parties, had learnt to swim, and had taken a music examination, which she had passed with honours. There was a marked change in her personality in that she had become natural and care-free in manner and even careless regarding her personal appearance and possessions. Fifteen months after first being seen her mother wrote to report that the child had continued to lead a normal and happy life. She had been made captain of her form, had been swimming regularly, took part in all school games, and was thoroughly absorbed in school life. There had been two attacks of asthma at an interval of thirteen months.

Case II

A boy aged 11½; an only child. No relevant family history was obtained. The maternal grandparents shared the home. The boy had been repressed by his father, who was domineering and exacting, and over-protected by his mother. He was healthy at birth, but from infancy had been subject to eczema and liable to recurrent coughs and colds. Whooping-cough at 7 years of age was followed by removal of tonsils and adenoids. When 8 years old he suffered from a common cold, followed by an attack of asthma. Attacks had then persisted at intervals of two to four weeks. The longest period free had been five months at 10½ years of age. The boy had experienced three attacks in the fortnight previous to being examined. Immediately after an attack he was, according to his parents, irritable in temper and uncontrolled in behaviour. He slept propped up with pillows. In school work he was backward through lengthy and frequent absences, and was unable to attend theatres, concerts, parties, etc., or to enjoy any form of excitement without ill effect. He ran with difficulty and could not take part in physical exercise, swimming, football, or other forms of sport. He had been highly strung and restless from infancy, was of excitable nature, and had fears of the dark, water, etc. He had become increasingly anxious about his health, and was afraid of choking and hence of sleeping alone. He was timid, afraid of doctors and dentists and of any physical hurt. Recent examination by a consulting physician had proved negative as regards organic findings. On examination during the month of November no positive signs of organic disease were found. The boy was nevertheless of delicate appearance and below weight for his age and build. He was in a state of acute nervous tension and displayed numerous restless movements of the limbs that were not, however, choreic in nature. The intelligence quotient was found to be 128. Psychological factors, both

individual and environmental, were considered to be playing a part; psychological treatment of the boy and his parents was undertaken and their full co-operation obtained. Improvement in both health and confidence was noticed immediately. Five months after treatment was begun he had gained a stone in weight, had moved up twelve places in his form, and was taking part in all school activities. The masters were commenting on the marked change in the boy. Reports received after a year and nine months indicated that he was able to run, ride, swim under water, and take part in all forms of exercise without ill effect. He had lost his former fear of physical hurt, having undertaken a long-postponed course of dental treatment. His father wrote: "He is a different boy; he enters into everything nowadays, and it is lovely to see him so happy." There had been three asthmatic attacks of short duration.

Case III

A girl aged 10½. Her maternal great-uncle had suffered from asthma in old age. A male cousin on the father's side had suffered from asthma in middle age. The father was said to have been "nervy" since the war of 1914, and the mother was nervous and highly strung. The patient was the second of two girls. From infancy she had been coddled and over-protected by her mother to an extreme degree. She was healthy at birth, but at 15 months of age had experienced an attack of bronchitis followed by asthma, which had persisted. She was liable to recurrent coughs and colds and had been in a chronic state of ill-health throughout childhood. At 10 years of age her condition had been investigated at a children's hospital, but no organic disease had been found. Asthmatic attacks had occurred every two to four weeks, the longest period of freedom being three months when 10½ years old, following a period of three weeks spent in hospital. She had experienced an attack seven days before being seen, and attacks were said to be becoming increasingly severe and incapacitating. She had missed a great deal of schooling, having been present on three days only during the previous term, and was backward in school work on this account. She was taking a much-restricted diet, slept propped up in bed, and was unable to run, play games, or take part in physical training, dancing classes, parties, or visits to the cinema. Her disposition was described as being artistic, musical, excitable, and highly strung. On examination during the month of April no positive signs in the chest were found, but the child was of frail appearance and much below the average weight for her age. The intelligence quotient was 113. She was tense, eager, and excitable. Psychological factors, particularly of environmental origin, were considered to be playing a prominent part. Psychological treatment was undertaken and co-operation of the girl and her mother obtained. Five months later the child had made ninety-four out of a possible 112 attendances at school, was eating a normal diet, had gained 8 lb. in weight, was joining in all school activities such as games, dancing, exhibitions, and rounders matches, and was able to visit the cinema without ill effect. For the first time for three years she had been able to enjoy an "asthma-free" holiday at the seaside. Her mother, who was no longer anxious and had ceased to coddle the child, stated quite voluntarily: "I was an example of the over-anxious mother. The girl's health had become an obsession with me. I was dwelling on her day and night, kept asking her if her breathing felt tight, and when she was in bed kept running in to see if she was breathing properly. I realize now that I was smothering her with affection, swamping the girl's personality, and not giving her a chance to think for herself." There had been three mild attacks of asthma, which, as shown by the improved school attendance, had been thrown off more readily than formerly. At that stage the course of treatment was interrupted by the evacuation scheme for school children. When seen three months later, however, it was reported that she had suffered an extremely severe attack of asthma forty-eight hours after leaving home, but on return to her family had gradually regained her former health and vigour. The child is now under treatment again.

Case IV

A boy aged 8½ years; the eldest of a family of three boys. His paternal great-grandfather and a paternal great-uncle had suffered from asthma in middle age. A paternal uncle was

subject to hay-fever. The parents were ambitious for their sons and anxious that they should do well at school. The patient was healthy at birth, but liable to eczema as a baby. At 12 months of age, while teething, he had an attack of bronchitis followed by asthma, which had persisted. He had been liable to recurrent coughs and colds and suffered a severe attack of whooping-cough at 6 years, which had been followed by removal of tonsils and adenoids. Tuberculosis was suspected at 8 years, but physical and x-ray examinations revealed no evidence of organic disease. Asthmatic attacks had occurred every two weeks, the longest period free from attacks being eight weeks during the summer months. The patient had experienced an attack two weeks previous to being seen. He was more often away from school than present, rarely being able to attend for more than two consecutive weeks, and was consequently backward in school work. He was unable to run, exercise, play games, swim, or take part in parties, concerts, etc. He was said to be of over-eager excitable disposition and anxious nature, to worry about lessons, to be afraid of the masters, and reluctant to return to school after absences. He was also said to lack courage generally, to cry readily, and to be over-dependent upon his parents. On examination, in the month of January, signs of bronchitis were present, while his general bodily condition and posture were found to be extremely poor. The intelligence quotient was 114. The boy's gross lack of self-confidence was shown by his attitude towards school work. When invited to read text which was well within his capabilities he became embarrassed and nearly broke into tears. Psychological factors, mainly personal but to some extent environmental, were considered to be contributing to his condition. Treatment along psychological lines was undertaken and the full co-operation of the boy and his parents obtained. Eight months later, apart from four days' absence, he had been in regular attendance at school. He was able to join in with all school activities; he had taken part in physical training and games, and had learnt to swim. He was no longer afraid of his schoolmasters, and was able to hold his own with other children. He had experienced four attacks of asthma, but had thrown these off more quickly, as shown by improved school attendance.

Case V

A boy aged 15½ years. His father had suffered from asthma as a child, and his maternal grandmother had had bronchial asthma. The patient was the eldest of three children, whose parents lived in furnished rooms until he was 3½ years of age. Being a fretful baby he was indulged in order to pacify and quiet him, and was later coddled and fussed over. He was healthy at birth, but was restless, slept badly, and had attacks of breath-holding as a baby, while bed-wetting persisted up to 3 years of age. He was not liable to coughs and colds and suffered no illness affecting the chest. He had had nasal catarrh, for which cauterization had been carried out without apparent benefit two months previously to being seen. He had been constantly under medical care. Asthma attacks had started, for no apparent reason, when he was 3 years old, and had persisted, occurring once, twice, or thrice nightly. The longest period of freedom had been four weeks, while in a convalescent hospital at 14½ years of age. He had lost six months' schooling in every year and had missed, through ill-health, the opportunity of competing for a scholarship to a secondary school. On leaving school he had endeavoured to follow an occupation, but after a few weeks had been forced to give this up on account of ill-health. He was unable to play games, swim, or undertake any activity involving physical exertion. He was unable to visit cinemas, attend football matches, or to enjoy any of the normal activities of young people. He slept propped up in bed, and had shared a bedroom with his mother from 13 years of age on account of the severity of the attacks. Dieting had been tried without effect, and the boy himself was of the opinion that nervous factors, more particularly excitement, contributed largely to his symptoms. He was said to have been highly strung and excitable from an early age and to have become increasingly irritable and difficult to live with. He was gifted in drawing and designing, was ambitious to become an architect or draughtsman, and was irritated at his inability to earn a livelihood. On examination, during the month of December, he was found to be of unhealthy appearance, had an extremely

bad posture, and was much below average weight. There was, however, no evidence of active disease. The intelligence quotient was 121. He was observed to be shy, self-conscious, easily embarrassed, and lacking in self-confidence. His mother was unable to accept the idea that treatment other than that of a medicinal nature would have any effect, but the boy was considered to be a suitable case for psychological treatment, and, in spite of the parental attitude, proved to be co-operative. His physical energies gradually increased, he became able to visit the cinema, to watch football matches, and within a few weeks to help at a petrol station. He was calmer in temper and more pleasant in the home. He began to sleep soundly and to have occasional attacks of asthma only. At the end of five months he was in regular employment in a designer's office. He was learning to dance, playing football, visiting places of amusement, and associating normally with companions of his own age. After eleven months his mother reported that the boy was still in regular employment, had gained 2 stone in weight, and was able to take part in all the normal activities of young people. There had been "an odd, very rare, slight attack of asthma," but the fact that he had lost but two days' employment in eight months indicated how little he had been incapacitated by these attacks.

Study of the literature reveals a growing tendency to consider that nervous or psychic factors may promote allergic responses in a person of allergic diathesis. This view is confirmed by my own experience. A history of family or previous personal allergy was obtained in each of the five cases described. The part played by infective processes involving the respiratory system in predisposing to asthmatic attacks has often been stressed by previous writers. In four of the above cases there was a history of recurrent coughs and colds, and in three of these of a bronchitic attack immediately before the first attack of asthma. Psychogenic factors have less frequently been regarded as being capable of inducing an initial attack of asthma. In the fifth case absence of gross infective processes, the history of parental over-protection dating from an early age, and the immediate and satisfactory response to psychological treatment are indicative of a psychogenic basis. The strongly allergic family history, however, suggests that this may be an example, to use Bray's (1937) analogy, of the power of psychic trauma to fire the already loaded allergic gun. I have yet to meet a case of asthma in childhood in which a family or previous personal history of allergy is absent and therefore one which can be considered purely psychogenic in origin. The view that asthmatic subjects are characterized by certain personality traits has been advanced by several writers. Experience suggests that those who are of superior general intellectual ability and of excitable (in the strict sense of the word) disposition are particularly prone, while strongly artistic or musical bent is a characteristic of many.

Treatment

The plan of treatment adopted in each of the cases was:

1. Physical examination followed by reassurance of the parents regarding the child's physical state.
2. Advice to the parents on the necessity for allowing the patient freedom to enjoy the normal privileges of childhood, paying special attention to any particularly adverse attitude such as coddling, fussing, over-anxiety, or expecting unduly high standards in lessons or behaviour.
3. Independent interviews with the child during which general reassurance was given based on simple explanations of the effects of fear, worry, over-excitement, etc., on the body in general and on the breathing apparatus in particular, and upon the readiness with which these could be overcome. The child was given ample opportunity to speak of his fears and anxieties, and as treatment progressed was encouraged to report personally upon his

success in overcoming difficulties at home, at school, in the swimming-pool, or on the sports field. No other form of treatment was employed during the time that the cases were under observation, the use of drugs, even during the asthmatic attacks, being discouraged.

Results

Restricting discussion for the time being to the effect of treatment on the asthmatic attacks, the results are shown in the following table. The classification used is that employed by Boland (1938), who graded cases into five groups according to the frequency, and to some extent the severity, of the attacks, Group I comprising the most severe cases.

Case No.	Group before Treatment	Group after Treatment	Places Promoted
1	IV	V	1
2	III	IV	1
3	II	III	1
4	II	IV	2
5	I	IV	3

It will be seen that in the first three cases described the patients while under treatment improved to the extent of being promoted one grade, in the fourth case two grades, while in the fifth the patient was promoted three grades. It must be remembered that the patients had previously experienced periods of freedom from asthmatic attacks ranging from one to six months. While it is within the bounds of possibility that in the first four cases the improvement observed in the severity and frequency of the attacks was unrelated to the line of treatment that had been adopted but was attributable to spontaneous recovery, in the fifth case improvement was manifested so rapidly and consistently from the very onset of treatment that the possibility of spontaneous recovery could hardly be entertained. Diminution in the frequency and the severity of the attacks was, however, but one aspect of the improvement obtained in these cases. An outstanding feature was the effect upon the patient's general physique as shown by his ability to take up and retain employment or to be in regular attendance at school, and still further by his increased capacity for taking part in physical activities or normal excitements without ill effect. A third characteristic, and perhaps the most noticeable of all, was the alteration which was brought about in the child's personality and in its outlook on life. Children formerly characterized by shyness, diffidence, anxiety, and over-conscientiousness became confident, happy, and care-free. The spontaneous remarks of parents, teachers, and others gave ample evidence of this alteration. A satisfactory response to treatment appeared to depend primarily upon the recognition and adjustment of adverse factors in the child's mental attitude towards his symptoms and in the parents' attitude towards the child's ill-health, and to have no direct relation to the duration of the symptoms, the severity of the attacks, or the degree of incapacity.

Discussion

Two main factors emerge from a study of recent literature on the subject of bronchial asthma. First, the growing tendency to consider psychological factors as being of significance in its aetiology; and, secondly, and arising therefrom, the necessity for employing appropriate measures of treatment for this aspect of the disorder. It would seem from the examples here described that psychological factors may be of importance either in predisposing to or in precipitating asthmatic attacks, and that the introduction of psychological methods of treatment in selected cases, whether this takes the form of simple reassurance, removal of adverse environmental attitudes,

re-education, or resolution of psychoneurotic problems, merits greater attention than it has hitherto received. Particularly would this appear to be so in patients who are still at an age when habits of mind and bodily reflexes are less firmly established.

Summary

Views expressed by contributors to medical literature on the significance of psychogenic factors in cases of bronchial asthma are recorded.

Five cases of asthma in childhood referred for psychological investigation are described.

Conclusions regarding the respective parts played by allergic, infective, and psychogenic factors in the aetiology of asthma in childhood are arrived at.

The methods of treatment adopted and the results obtained in specific cases are discussed.

The desirability of employing psychological methods of treatment in selected cases is stressed.

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TREATMENT OF INGUINAL HERNIA IN ADULTS

BY

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A glance at the above title may, I feel, evoke the response on the part of many surgeons that "surely we now know all that is to be known on this subject." When we explore a little further into the matter and refresh our minds on the results of the treatment of inguinal hernia they are so disappointing as to justify fully an article of this nature. I will not attempt to describe a new operation for the cure of inguinal hernia (such a thing would now be almost impossible), but rather would make a plea for a rational procedure that will appeal to the average surgeon and ensure success. That such a plea is necessary is proved (1) by the large numbers of recurrent hernias that come to hospital; (2) by the available statistics on the subject, some of which are a blot on present-day surgery; (3) by the disinclination of many practitioners to advise operative treatment for their private patients; and (4) by the existence of numerous prosperous firms which daily advertise their wares for the "cure" of hernia of all types by means of a truss.

Operative Results in the Literature

A short survey of the results of operations by different men discloses very different results. Fallis (1936), reporting on 1,600 cases, stated that of direct hernias 11.6 and of indirect 7.4 per cent. recurred. Max Page (1934) gave the recurrence rate as 20.2 per cent. in indirect and 25.8 per cent. in direct inguinal hernia. The latter figures were compiled from a list of healthy policemen, on whom one should expect the best results. Grace and Johnson (1937) of New York reported results