sarily be applicable to patients seen at a district general hospital. Our findings suggest, however, that successful colostomy closure is not dependent on the age of the patient or the disease for which the distal resection is performed. While breakdown is thought to be due primarily to a failure of technique, closure of a colostomy within one month of its construction should be undertaken with caution.

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Emotional Problems of Childhood and Adolescence

The Psychosomatic Approach in Paediatrics

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The psychosomatic approach is by no means universally endorsed by the medical profession. The conservative doctor views it with distrust, believing that psychology bears little relevance to "real" disease, while the rabid enthusiast overstates the case by his emphasis upon analytic symbolism—for example, that diarrhoea in colitis signifies riddance of "bad" thoughts.

Somewhere between these two extremes a group of disorders undoubtedly exists in which, over and above the acknowledged role of emotional precipitants, psychological factors do seem to influence both prognosis and therapeutic response—the more so in children because of their relative vulnerability and interdependence on the family. These disorders include migraine, atopic eczema, asthma, spastic colon, peptic ulcer, and, perhaps more equivocally, ulcerative colitis.¹ The object of this paper is to promote the rational management of such conditions in childhood through a clearer understanding of the aetiological principles involved.

Consider, for example, the following contrast in case histories:

Illustrative Case Extracts

John aged 9, has been asthmatic since infancy. Tests of ventilatory function confirm serious bronchopulmonary involvement, meriting massive steroid therapy. Despite this, he still spends long periods in hospital, where his cushinoid appearance and stunted growth are of major paediatric concern. John's father had been away from home for long periods when the boy was younger. He is as intolerant of illness in himself as in others, and constantly exhorts the boy to "do without his medicine." John's mother has a better understanding of the problem but is unable to influence her husband. There is now a second child—a girl aged 2, asthmatic-free, and clearly father's favourite.

This boy has hardly known his father, yet now he finds himself in unfair competition with his sister and further disadvantaged by his bronchospasm. Not surprisingly, he resents the asthma, defiantly trying to suppress symptoms and curtail medication, even when clearly incapacitated and at risk.

By comparison, James, aged 10, is a physiologically "mild" asthmatic, whose ventilatory function is virtually unimpaired; yet he too has a poor record of school attendance, with frequent visits to his doctor, and repeated referral to hospital to try to establish a stable treatment regime. Skin sensitivity tests have proved consistently negative, and the response to disodium cromoglycate disappointing, there has been recourse, even in this case, to short reducing courses of steroid in the hope of "stabilizing" the asthma.

Yet James's personal circumstances are very different from those of John. He is an only child, born after three successive abortions, and was said to be a "weakling" as a baby. When asthma first developed at the age of 4 both parents became acutely concerned, taking it in turns to sit up at night to nurse him through nocturnal episodes. The boy himself is fearful of his asthma, avoiding any situation which might remotely spark off an attack. The slightest wheeze necessitates time off school and consequently he is falling behind already in his attainments.

Case Comparison

Judged by purely somatic criteria, both these boys are asthmatic; in both, the condition is of long standing (six and eight years, respectively) with repeated referral to hospital, appreciable loss of schooling, and resulting academic retardation. Moreover, both are being treated with cortisone. When, however, the comparison is couched in psychosomatic terms, significant differences emerge, which have both therapeutic and prognostic implications.

For example, John's need for steroid is so vital as to be potentially life-saving because of his very poor ventilatory reserve, whereas in James's case it is neither vital nor even physiologically indicated, because ventilatory function is substantially intact. Why then is he being over-treated? By the same token, the degree of disablement experienced by James is out of all proportion to his known potential as measured by spirometry. He is therefore suffering needless handicap, not solely attributable to disordered physiology. Conversely, at the other extreme

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comprehensive pharmacotherapy was failing to achieve significant progress for John, who had indeed become steroid refractory—yet even this situation has been significantly modified through psychosomatic intervention.

In John's case, though scant attention had hitherto been paid to the powerful interplay of emotional overtones between him, his father, and his sister, these were no less pertinent through having been ignored. In particular, the father's critical attitude, stemming from frustrated aspirations, had led him to minimize the handicap by denying its gravity. Complementary denial by John then creates the hazard of parent and patient both tending to blind themselves to obvious danger signals. In these circumstances dispensing with drugs in the mistaken belief that one is better off without them may well induce a potentially fatal outcome.

Apart from this climactic danger, the tension of strained interpersonal relations, covertly generated over a long period, tends to reinforce spasmodic constriction in an already disordered bronchial system, thereby neutralizing the effects of pharmacotherapy.^{2 3}

Therapeutic Guidelines

The basis of intervention in this type of problem (over and above drug therapy) is to scale down the boy's own level of aspiration so that he achieves greater realism in outlook and learns more equably to live within the limitations imposed by his asthma. He can only do this to the degree that father learns to accept him for what he is, rather than reject him for falling short of his fantasied filial ideal. There is thus the complementary task of realigning the paternal attitude.

Specifically in John's case progressive reduction in challenge has now been achieved along these lines to the point at which pharmacotherapy can re-exert its action unopposed; but the time interval involved has been a further two years, exemplifying the difference between a narrowly organic approach and the broader scale of psychosomatic intervention.

In the case of James, the "mild" asthmatic, the position is diametrically opposite. Here, there is every indication to step up the level of activity commensurate with known spirometric performance, and thereby counteract the state of invalidism induced over the years by excessive parental concern. But to procure this there must first be a shift in orientation, both in the boy and in his parents, which takes time and skill to engineer because there is no short cut to insight promotion. In this instance a full twelve months were required to reverse pre-existing pathology of attitude, but, with emotional emancipation progressively displacing the need for steroid, ultimate stability was established on minimum maintenance therapy.

In neither case could such betterment have been achieved without due cognizance of family interaction; and, once acknowledged, this extension of the diagnostic field confirms the relevance of psychosomatic considerations.

Aetiological Principles

Certain principles derive from this exercise in case comparison. The first is that despite obvious contrasts in psychopathology, the two boys share, in common with all asthmatics, a basic substrate of immunophysiological vulnerability which is fundamental to the concept of asthma—and indeed to all truly psychosomatic disorders. In asthma this is expressed as excessive lability of the bronchial system⁴; in eczema as atopic hypersensitivity of epidermis; in migraine as a presumed anomaly of intracranial microcirculation; while in peptic ulcer it is reflected in raised serum pepsinogen levels.⁵

On this basis there is no such thing as "psychogenic asthma" or "psychogenic migraine". Similarly, in children with peptic ulcer "it is doubtful if (emotional factors) are of real aetiological significance, however important they may be in terms of

management."⁶ Emotional pathology, in other words, never makes a primary contribution to aetiology in any of these disorders but can profoundly influence both their course and therapeutic outcome. To that extent, it is as pertinent as organic pathology, with which it merits equal consideration.

The Psychogenic Triad

Unlike the organic factor, however, there is no unitary psychogenic contribution. On the contrary, most cases involve a constellation of factors operating on the principle of sequential interaction among personality structure, parent/child relationship, and relevant life circumstances.

Personality Profile

The concept of a specific personality profile underlying each particular psychosomatic disorder gained popularity in the early post-war period but has latterly been discounted by more recent epidemiological studies.⁷⁻⁹ Among children with migraine, for example, it is easy to recognize the "hard driving, anxious to please, compulsive, sensitive" personalities described by Holguin and Fenichel,¹⁰ but no more universally so than in, say, peptic ulcer, infantile eczema, or asthma.

Nevertheless, personality structure does have some bearing on clinical outcome, not so much through specificity as through the reaction pattern dictated by a particular makeup. The perfectionist schoolboy, with genetic predisposition to migraine, may, for example, activate symptoms through anticipating school pressures, which might leave a less aspiring personality quite unruffled. In the same vein, the robust defiance of John, the severe asthmatic, militates against realistic acceptance just as much as immaturity in James, his milder counterpart, predisposes to invalidism.

Parental Contribution

In paediatrics, in particular, personality factors are inextricably linked with parental contribution: the one cannot be evaluated in isolation from the other. Hence, in James's case parental overinvolvement reinforces his own propensity for "caving in," thereby perpetuating overdependence. Similarly, in John's case paternal intolerance potentiates his own intolerance in the dangerous exercise of mutual denial.¹¹ In both, there is the need for radical realignment of the parent/child relationship, but in diametrically opposite directions.

Identical considerations apply to other psychosomatic syndromes. Interact the migrainous, obsessional schoolboy, with an equally punctilious parental figure (often herself a migraine subject) and the probability of chincal attack is thereby considerably enhanced, because now the patient has a double set of meticulous standards to maintain.

Situational Stress

The third component in this triad of contributory psychopathology is the pattern of life circumstances, possibly conducive to the timing of frank symptoms. In John's case the pertinent circumstances were father's return home, followed by the birth of his rival sister; while in James's case the three prior abortions had clearly contributed to parental over-concern. As for other syndromes—for example, peptic ulcer—Muggia and Spiro¹² believe "that most of our patients have developed an ulcer in a setting of conflict or after an event responsible for loss of security . . . which in addition to the inherited predisposition, brings about a train of events that leads to the ulcer. It is impressive that symptoms improve with environmental manipula-

tion . . . and particularly with increased parental reaction and understanding."

Therapeutic Considerations

But while "evaluation of the family constellation in every child with a duodenal ulcer is part of therapy"¹² it is by no means the *whole* therapy, because in psychosomatic disorder, management, like aetiology, is multifactorial and therefore governed by the principle of *summation*. In other words, psychotherapy, where it is pertinent, should never usurp the role of drugs, desensitization, diet, or other specific provisions; but equally, to be meaningful at all, management must embrace "psyche" as well as "soma," because the treatment schedules so involved are complementary—not mutually exclusive.

In migraine, this means combining specific therapy, such as ergotamine (in the prodromal phase of vasoconstriction), with adjunctive measures such as dietary restriction of tyramine-containing foods, and psychotherapeutic buffering; in peptic ulcer, it means combining dietetic measures with appropriate drug therapy and emotional rehabilitation; while in asthma it means desensitizing where appropriate, combating secondary infection where suspected, prescribing chemotherapy as indicated, plus, once again (where relevant) psychodynamic intervention.

Conclusion

In every one of these "models," characterized by genetic vulnerability of the target organ, the overall aim should be reciprocal reinforcement of therapeutic benefit as opposed to unilateral preference for particular regimens. If it means anything at all, the psychosomatic concept discounts doctrinaire treatment of any kind in favour of the global approach.

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Transmission of Malaria

75th Anniversary of Ronald Ross's Great Discovery

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This year on 20 August the world of tropical medicine honours one of its great men, Sir Ronald Ross, who seventy five years ago discovered the transmission of malaria by mosquitoes.

In England the disease was still common in the last century, particularly in the fenlands of the eastern counties. Even the emigrants to the backwoods of Canada and America knew it as "settlers' fever." In the hot countries of the tropics it was the prime killer both of the indigenous populations and of European traders and missionaries. Its treatment by quinine had been discovered as long ago as the 16th century, but its cause and nature had remained a mystery until in 1880 Laveran in Algeria found the parasite in the blood of patients with the disease. Now it remained to be discovered how man became infected, and it was not for another 17 years that the mystery yielded to the determination, tenacity, and skill of Ronald Ross (Fig. 1), a surgeon-major in the Indian Medical Service.

Unchosen Career

Ronald Ross was born on 13 May 1857 at Almora, India. His father was General Sir Campbell Claye Grant Ross, K.C.B., in command of the Afghan Frontier. Young Ronald spent his early childhood in India and came to England at the age of 8 to start his education. At 17, in obedience to his

father's wishes, he entered St. Bartholomew's Hospital Medical School. The career was not of his choosing, for the young Ross was artistic and literary by inclination and had little real interest in science. Philosophy, poetry, music, and mathematics were his interests, and he attained high standards in all of them. Throughout his life they remained his constant source of joy and refreshment. Nevertheless, he obtained the Conjoint diploma and entered the Indian Medical Service

FIG. 1—Ronald Ross aged 41.

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