The opinion is given that admission to hospital is unnecessary unless complications develop or the social conditions are unsatisfactory. Routine administration of antituberculous drugs is not indicated.

The surgical operations were performed by Mr. Dillwyn Thomas and Mr. Cyril Evans at Morrision and Sully Hospitals. Miss E. Rosser is thanked for the secretarial work.

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ADDENDUM.—The patient (aged 12) mentioned in the text as awaiting operation for bronchiectasis has since undergone a successful right lower lobectomy. Prior to operation, investigation by barium swallow, oesophagoscopy, bronchoscopy, and bronchogram revealed a fistula of the oesophagus 2 in. (5 cm.) above the cardia, extending into a basal branch of the right lower lobe bronchus, with secondary bronchiectasis and abscess formation.

SOME ASPECTS OF PARANORMAL HEALING

BY

LOUIS ROSE, M.R.C.S., L.R.C.P.

Associate Chief Assistant, Department of Psychological Medicine, St. Bartholomew's Hospital, London; formerly Honorary Neuro-Psychiatrist, Lowestoft and North Suffolk Hospital

The attitude of early man towards the nature and treatment of disease was influenced by magic and superstition and later by formalized religion. In the sixteenth century academic medicine, following in the Hippocratic path, began to diverge from superstition and religious influence, although sorcery continued to play a part in medical practice. Within the authority of the early established Church healing was practised by laying on of hands, by prayer, and by anointing—rites frequently associated with magic and superstition (Frost, 1940). To-day in China and Africa the medicine man is thought to be active even where the Christian faith is adhered to. Dean Inge (1925) says: "It is quite unnecessary to go to Australia or Central Africa to find the savage: he is our next-door neighbour. The mentality of the stone age exists on our platforms and in our pulpits. There is no superstition too absurd to find credence in modern England—fetishes and tabus dominate London drawing-rooms."

In many countries sufferers from all kinds of disability are claimed to have been cured, or at least greatly relieved, by intervention of a "healer" after orthodox medical treatment has failed. Healing shrines such as Lourdes are not considered in this report, since religious faith is the major factor in the healing situation, no individual person being deemed to act as a healer endowed with specific powers. Organizations such as the City Temple combine faith- and individual-healing with orthodox medical treatment, so that no clear-cut assessment can be made of the part played by either. As explained later, this problem also arises in absent healing.

Various forms of paranormal diagnosis and treatment are claimed by clairvoyants and mediums, but supporting evidence is hard to come by. (Father Robertus, of Rapperswill in Switzerland, is reputed to be a healer of animals.)

I have attempted to survey the nature and results of unorthodox ("paranormal") healing. "Healing," for the present purpose, is taken to mean the inducement of a state of comparative well-being by some form of personal contact, physical or mental. "With contact healing, there is the tangible human link of the healing medium between the healing spirit guide and the patient" (Edwards, 1953). The "physical" approach may include "manipulation" of a disabled part of the body or laying hands upon the part of the body near, or associated with, an organ. ("Manipulation," in this context, is an assisted encouragement of the subject to move, or allow to be moved, part of the body.) The "mental" method involves some form of prayer or mental communication from healer to patient at a distance. Quite often one finds the healer bringing his influence to bear while orthodox treatment continues—both claiming the credit. Absent healing is "a progressive process in which the first phase is a toning up of the general body condition," with concomitant "increased vitality, brighter outlook and sounder sleep," "as the causes are removed, so the symptoms of pain and discomfort lessen and disappear. Healing is very often received during sleep" (Edwards, 1946). A weekly letter from the healer to the patient is required "to maintain the continuity of the healing." (The patient does not necessarily know that the healer's aid has been sought.) These weekly reports, which present the healer with a picture upon which he can base his therapeutic activity, must involve an enormous volume of correspondence and time.

Method of Inquiry

I attended demonstrations of healing to gain information about the nature of this work and its results. Patients suffering from "incurable diseases" who had "not been helped by doctors" were to be healed by "spirit power" derived "not from us—we are agents—human contacts." The healer moved arthritic joints, ran his finger along deformed spines, and encouraged people to walk, stand upright, and so forth. (When given the opportunity of approaching a patient suffering from scoliosis, the circumstances did not permit of his examination; I was merely asked to agree that there was "spasticity" of the spinal muscles. Rejecting this when on the point of agreeing without checking the validity of the statement, I realized how difficult it must be, in the face of authoritative suggestion, for the subject not to accept any proposition put by the "healer.")

Some patients appeared to receive immediate benefit, in that they exhibited comparatively free, painless movement of joints which had apparently withstood medical treatment for years; but one woman, who was able to leave the platform without the two sticks hitherto in use, was again leaning heavily on them after the demonstration—a phenomenon savouring strongly of suggestion. Does anything happen to the sufferer treated by a healer, and, if so, what and why? The questions involve a study of the disability treated; does the disability improve, or does the patient's attitude towards it change, bringing with it apparent improvement of the specific and general condition? If such improvement occurs, is it linked with a specific psychological attribute essentially present in sufferer or healer, or in both? If this be the case, what is the means of communication in healing? What is the function of personal contact? Does absent healing depend on some form of telepathy?

I began to investigate individual cases reported in the press and elsewhere, including some submitted by healers and subjects. Later, I was granted space in the *British Medical Journal* inviting colleagues with knowledge of cases successfully treated by a healer to supply (with the patients' permission) copies of medical records or other relevant information. Many non-medical people concerned with healing co-operated, and one well-known healer, with every evidence of good faith, has been at all times ready to reply to questions and to offer facilities for investigation. More recently he has made efforts to expand the case material by inviting "healed" subjects to communicate direct. The co-operation of two hospitals for "incurables" was unsuccessfully sought. Explanatory letters and franked envelopes, sent to patients claimed to have received benefit from healing, were accompanied by a consent form to facilitate the routine request for medical records. Many reports made further follow-up certain to be fruitless. Some patients were interviewed and their statements checked against medical records, but it is necessary to emphasize the stress which has been laid upon the so-called "miraculous" cures of the patients investigated, and the paucity of suitable case material actually revealed: the few short case reports which follow illustrate the difficulties met with.

Analysis of 95 Cases Under Review

(1) In 58 cases it was not possible to obtain medical or other records, so that the claims remain unconfirmed.

(2) In 22 cases the records were so much at variance with the claims that it was considered useless to continue the investigation further.

(3) In two cases the evidence in the medical records suggests that the healer may have contributed to amelioration of an organic condition.

(4) In one case demonstrable organic disability was relieved or cured after intervention of the healer.

(5) Three cases improved but relapsed.

(6) Four cases showed a satisfactory degree of improvement in function, although re-examination and comparison of medical records revealed no change in the organic state.

(7) In four cases there was improvement when healing was received concurrently with orthodox medical treatment.

(8) One case examined before and after treatment by the healer gained no benefit and continued to deteriorate.

M. L. (Group 2), reported in the press as having been cured by a healer, writes, "I cannot claim to have derived any benefit as a result of that one visit, as that was more than two years ago, and it is only in the past few weeks that I have felt any improvement; whether this is due to treatment I have received at the hospital clinic I cannot say."

Mrs. M. H. (Group 2), the subject of an article in a well-known pictorial magazine, sent her history. After repeated investigation and treatment she was discharged, "presumably as incurable," obliged to continue wearing her surgical belt for thirteen years. In 1949 she went to her healer, at whose hands she was "cured." The hospital records revealed nothing to verify her history, and her doctor wrote in terms which did not substantiate her claims or those of the newspaper, giving his opinion that there was (at least) a large functional exaggeration factor.

J. R. (Group 5) was "permanently cured"—"psychic healing succeeded when doctors failed." He was "given up" by professors and doctors who examined him as a hopelessly incurable case. Born paralysed in legs and arms, he was dumb and had a distended stomach. . . . After four years he received one treatment and the paralysis left him . . . the next morning he spoke and he could run." He has now "grown into a fine young man, leading a normal, happy life." The hospital recorded treatment of rickets, coeliac disease, chicken-pox, whooping-cough, and Brodie's abscess of the ankle, and there is no mention of any other disability, temporary or permanent.

Mr. J. E. E. (Group 3) wrote: "In June, 1952, after having been on your list of absent healing, I suddenly recovered the sight in my right eye, which had been completely blind for over fifty years. It came as long sight, and was pronounced by my

specialist optician as perfect, and the healing as miraculous"; he observed "vision perfect, eye clear, bright, and in splendid condition, no fear of deleterious effects."

The ophthalmologist concerned commented, "There is no miracle—he was a case of spontaneous dislocation of the lens, which was cataractous. The lens dislocated back into his vitreous chamber, which is the old operation known as couching, and is brought about by some violent exercise or some sudden jerk—generally forgotten when a miracle is under consideration. Although uncommon, it is a well-known clinical entity." (Could there have been functional blindness after the couching which was relieved by suggestion, the patient beginning to see after being encouraged to look?)

Mr. R. B. (Group 3). A week after biopsy in June, 1953, Mr. B. was informed that he was suffering from cancer of the larynx, demanding a major operation. A healing interview followed during which his hoarse voice began to improve and gain in volume. On July 21, 1953, he was re-examined under an anaesthetic in hospital and informed that the findings were at variance with the previous report. The two specialists who examined him after he had had direct healing both reported "no cancer now," and one of them wrote later, "I doubt if anyone will give a definite reply. . . . My own belief is that it was pure fortunate coincidence that this man had a piece removed for biopsy and it happened to contain all of the carcinomatous tissue."

Miss M. B., aged 23, weighing 6 st. (38 kg.), dying of bilateral tuberculous cavities and laryngitis, improved immediately after being visited by a healer and is now a comparatively healthy young woman, hoping to be married. She denies taking any drugs at the relevant time, but her doctor writes, "From the very beginning of a course (of isonicotinic hydrazide) she made a gradual and continuous improvement—the tuberculous laryngitis cleared in about a month. At the time Miss B. fully acknowledged the efficacy of the tablets and was very conscientious about taking them." This case demonstrates the usual conflict of evidence.

Dr. O. (Group 4): "Doctor cured in three treatments." Sudden acute pain in the lower abdomen took Dr. O. to a surgeon and two other doctors, who diagnosed hernia, "small but definite," which could not be cured without operation. "I walked with difficulty, holding the rupture in with the fingers of my right hand. A friend, a spirit healer in his spare time, treated me by laying on of hands under spirit influence. After four or five treatments the hernia completely disappeared—there has been no trouble since."

This seemed at last to afford incontrovertible evidence in favour of the healer. But spontaneous "cure" is known by surgeons to occur in the absence of therapeutic intervention.

D. G. aged 37 (Group 5) mounted a "demonstration" platform with severe kyphoscoliosis and compensatory torticollis of long standing. The healer reduced the spinal curvature in his usual way by encouraging the patient to allow himself to move back and forth and sideways until marked improvement appeared in the spinal line. Meeting D. G. by chance after the demonstration and commenting on the apparent improvement in his back and on the residual torticollis, I offered to reduce the latter. This was achieved by placing one finger under his chin and encouraging him to allow his head to move into the normal position, at which point I said he would now remain well and left him, having gained his permission to check the hospital records. These disclosed a diagnosis of advanced spondylosis ankylopoietica; a Taylor jacket and supportive physiotherapy had been recommended. In the middle of 1951 he had complained of pain and stiffness and "would therefore appear to have developed a further increase in flexion deformity in the spine in the course of the last year." Reporting some months later, he revealed that the effects of the healer's treatment, and of my own, had lasted about three months, following which he had relapsed. A few weeks later he was admitted to hospital suffering from pulmonary tuberculosis.

This poses a question: even if the deformities had not relapsed, what is the nature of a power which assists in the healing of one disability while laying the body open to invasion by another, more dangerous, illness? What had happened in the disturbed mediastinum? Had the spinal manipulation been accompanied by intrathoracic trauma?

Mrs. G. M. L. (Group 5). A banner-line stated, "Deformity melted away." "Mrs. G. M. L., who had no power in her hands for about ten years, and whose arms had been crippled with pain, was helped from the stage by a journalist," who writes: "She gripped my hand with the strength of a normal person." This lady wrote: "I am sorry to tell you I am not cured of my complaint, but in fairness to Mr. — (the healer), had I followed his advice and continued with the psychic healing at my local spiritualist church, I may have been by now. . . . I certainly did feel free of pain; *for the time* a new woman."

Miss E. W. aged 49 had, at the age of 3½ years, "been in splints for a year." She suffered from "congestion of the lungs" and "spinal trouble" "due to falls and tuberculosis." In 1949 the patient, following a fall, "became more and more tired." She visited a chiropractor—"three disks had slipped in the lumbar spine, and he thrust them into place." "He did not touch the dorsal spine, which was deformed, for fear of breaking it." Pain and disability increased in spite of orthodox physiotherapy and the patient asked for absent healing in 1950. After some months she "did not get any worse" but *was still reporting to the hospital for treatment*. Later "during the night I felt my neck being gripped and pulled, and when I got up in the morning I found the top of the spine (which, as far back as I can remember, had protruded) had slipped into place and I was able to bend my neck from there, which I had not been able to do." There followed a journey to the healer, who straightened the dorsal spine ("which was certainly a miracle after being deformed for forty-two years"). "I was able that day to throw away my sticks and run into the house. I have no trouble in my balance and can now walk normally." Writing in April, 1952, she says, "I am hoping to get further benefit." (Note the contradiction.)

I examined this lady, who appeared to be a reliable witness. She had visited a healer on the principle of trying anything—"it couldn't do much harm"—and she now had no symptoms apart from "the back [which] does get a little tired." The hospital out-patient notes of 1949-51 revealed a "dorsal kyphosis, considered probably due to an old tubercular lesion of childhood." The report continued, "One day, after I had not seen her for some months, she walked in and told me that she had been cured by a Christian Scientist. He had put his finger on the prominence of her spine and she had had no symptoms since. . . . I noted at the time that *there was no obvious change in the physical state*; the kyphosis was as marked as ever." Re-examining her with radiological aid in 1953, the surgeon writes, "It would seem, therefore, that the physical state is actually the same as it was before she had her treatment—that is, *the organic bone formation is actually the same*. There is no doubt, however, that *her movements are much better than they were before*."

Obviously there had been great functional improvement in this case, but which therapy or therapist was responsible?

Mrs. L. W. aged 60 had a fifteen-years history of "rheumatism" with "enormously swollen" knees causing great interference with walking, with no response to treatment at various hospitals and clinics and at the hands of an osteopath. She received absent healing, before and after treatment by a healer in January, 1951. Although immediately relieved, considerable pain remained, but gradually the patient could lift her feet painlessly. The healer had lifted her leg right up without causing suffering, which she "couldn't possibly have stood if a hospital doctor (or she herself) had attempted it." She continued to receive treatment from a healer "for fear of slipping back." One night she was awakened by the feeling that the door had opened and a presence was beside her bed; she felt herself turned over and there was something like a murmur of voices in the room. She fancied herself "a little easier" next day. The hospital reported that since 1948 this lady had been attending for treatment of a non-toxic goitre, benign hypertension, obesity, and osteoarthritis of both knees, the latter checked by x-ray examinations. There was "considerable symptomatic improvement" when last seen. The physician wrote in October, 1952, to say ". . . she *seems to have improved subjectively* a good deal since the laying on of hands of her spirit healer—we can find little change since before this operation . . . the *angles of movement are about the same as they were at that time*."

M. R., a boy aged 9 (Group 8) suffering from pseudohypertrophic muscular dystrophy, was examined in consultation in December, 1951. A healer later told him he "would get better and that he had straightened his back." (I had found no spinal deformity). The family doctor wrote in February, 1953, "I am sorry to report that in my opinion the condition is very definitely worse."

The following extracts from patients' letters to a healer indicate the difficulty of assessing the value of absent healing.

1. "My friend, who was to have undergone a serious operation last Tuesday, is now *out of hospital*, having been told that she has improved so much that no operation will be performed. Thank you for your intercession. . . ."

2. "I have spoken to the sister *in the hospital*, who told me that she (a girl of 6) was dying and the recovery was a miracle." (The illness was meningitis, treated in the hospital by modern methods.)

3. "The cancer specialist says she was a walking miracle . . . he had never had a case like it—the spine, and later the pelvis, which were attacked by cancer, have calcified and strengthened in a remarkable manner—thought she would never walk again, and gradually through your and the spirit doctor's help the use of her limbs returned." The patient a few days later wrote, "Dr. P. has *not* said I am cured, nor a walking miracle, but he was pleased with the way my spine had yielded to treatment. I still have almost as much pain as I had and still have to have frequent injections of omnopon."

4. "I was discharged *from the sanatorium* last Thursday (April, 1953), and, considering I had a tuberculous bowel and both lungs affected, I think this is a wonderful achievement. I cannot thank you enough for *all you have done* for me."

5. "A specialist said it was polio, but she [her mother] preferred to nurse him at home. He progressed very quickly, and his mother says that is the help that he [the healer] has given. . . . The specialist was surprised at the quick relief from complaints. His speech is normal again and he seems his own bright little self except he has a *slight limp in one leg*. We all feel that the prayers of the spirit people have helped him." (Probably less than 15% of poliomyelitis victims suffer from permanent paralysis.)

Discussion

This investigation covers about 100 such cases, most of which were treated by one healer, but all were claimed in the press or by the healer, or patient, to have derived considerable benefit after orthodox medical treatment had failed. It is reasonable to assume for the present purpose that the results of other or lesser-known healers will not differ greatly. One healer claims to benefit 85% of all cases brought to his notice—a number running into seven figures. Many doctors have failed to reply to specific inquiry, and it may be that any kind of investigation of "paranormal" phenomena is thought to savour of unorthodoxy and should therefore be avoided. This may account for the absence hitherto of any medically inspired research in this field.

Some of the patients investigated were functionally improved, although expert medical opinion admits no change in the organic condition except in those cases in which change is explicable in terms of normal medical experience. How was this achieved if other than by suggestion? In each of three cases, a change, rare but not unknown in orthodox medical experience, took place in the organic state soon after treatment by the healer. Was this coincidence? Thousands who have given up hope of improvement at the hands of orthodox medical practitioners either feel better or find new hope after contact with a healer. Is not this contribution of value to society?

The report of the Committee of the Lambeth Conference set up in 1920 states: "Our Committee has so far found no evidence of any cases of healing which cannot be paralleled by similar cures wrought by psychotherapy without religion, and by instances of spontaneous healing which often occur even in the gravest cases in ordinary medical practice. The facts do not, in our opinion, detract from the good done by many religious healers; and, where the religious influence is of a wise and reasonable kind, greater and more permanent results may be expected than from non-religious methods." The Church has again appointed a commission to study the problem. In the meantime the relevant facts of body-mind relationship continue to be elicited and formulated in the field of psychosomatics. The problem of causality has been discussed by Strauss (1952): "We have mind acting on mind as the efficient cause, mind

acting on body, body acting on mind, and body acting on body as *causae agentes*." It is also important to remember that "single pathology" is uncommon in that two or more (apparently) unrelated symptom-complexes may coexist in the patient and may follow different courses. Gould's (1953) dictum, "Affect is the mordant of conditioning," throws light on the significance of emotion in suggestion and auto-suggestion.

Notoriously, throughout the ages, many sufferers respond to any method other than the orthodox treatment of the time. Suggestion with or without hypnosis in the hospital or consulting-room is less likely to result in the disappearance of a wart than, for example, the burying of half a potato in the light of a full moon. It may be of significance that many forms of treatment which are successful while the rationale is accepted by the therapist begin to fail when new information casts doubt on this acceptance. The sword of logic pierces the shield of conviction, and treatment technique is no longer successful—one of the main factors in the "suggestion" situation having been eliminated. Too much, but still not enough, knowledge may thus be a handicap in therapeutics.

Summary and Conclusions

About a hundred cases, all claimed to have received full or partial benefit from a healer, have been followed up.

No single case revealed conclusively that the healer's intervention *alone* resulted in improvement or cure of a measurable organic disability.

Three cases showed marked improvement or cure of such a condition after the intervention of a healer, but the healer's case can be explained away in terms of orthodox medical experience.

It is possible that the healer may have some power to influence the progress of disease, although this has not been established during the present survey.

Many thousands, possibly millions, of sufferers are constantly seeking unorthodox aid, and it is important to assess whether, in general, the healer is a power for good or harm. Even if many who have not been helped by doctors are given hope, does the healer, by his intervention, prevent a significant number of patients from receiving adequate medical care in good time? Clinical psychiatrists, employing suggestion as a specific therapeutic technique, continue to achieve healing results at least as encouraging as those met with in this series, and on the evidence to date it is difficult to conclude that the healer's art is more than an empirical technique.

There remains a wide unexplored field of inquiry, and much individual case-work in different racial and social groups is necessary, first, to establish the facts of paranormal diagnosis and treatment, and then to correlate their relationships and significance. This field work might usefully include a review of cases in which improvement has occurred *after* the cessation of medical treatment *without* the intervention of a healer. Long-term controlled experiments in absent healing could be devised. It is possible that the exploitation of suggestion (other than placebos) in rehabilitation following disability of all types might prove to be a valuable adjunct to normal therapeutic practice, and it may well be that the attitude of doctor to patient, or to the disability, is of far greater significance than has hitherto been recognized, except in the psycho-analytic "counter-transference" context.

Case histories apparently substantiating the claims of the healer should be investigated by a suitable panel with access to the opinions of sub-specialists, since the

accumulating evidence of body-mind relationship constantly reveals new psycho-physiological rationale in "cures" hitherto inexplicable. It may be useful to recall that Williams (1954) exhorts us "in medicine [to] expect the unexpected—but be surprised if it occurs."

Thanks are due to Mrs. K. M. Goldney, Mr. Harry Edwards, doctors, patients, hospital records officers, and others who have made this survey possible.

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TREATMENT OF ROUNDWORM WITH PIPERAZINE CITRATE ("ANTEPAR")

BY

L. G. GOODWIN, M.B., B.S.

AND

O. D. STANDEN, M.Sc.

(From the Wellcome Laboratories of Tropical Medicine,
London)

Piperazine in various forms has been used by French workers for the treatment of ascariasis (Fayard, 1949; Mouriquand *et al.*, 1951; Turpin *et al.*, 1952; Cavier, 1953). More recently, White (1954) has used "antepar," a syrup containing piperazine hydrate and citric acid, for the treatment of three children with roundworm infection. They received 0.5 g. twice daily (68 mg./kg./day), 1 g. twice daily (130 mg./kg./day), and 0.5 g. thrice daily (81 mg./kg./day) respectively. The worms were passed on the second or third day. Follow-up showed that complete elimination had been achieved. O'Brien (1954) used piperazine adipate in the treatment of two cases of ascariasis in children, giving 0.3 g. of the drug twice daily for several days. Worms were passed from the third to the sixth day of treatment. Apparently, no follow-up was made to determine whether or not all worms had been eliminated. In view of White's results and reported absence of toxic side-effects, it seemed likely that a single-dose treatment would be effective, and for this purpose tablets of piperazine citrate were prepared for use in East Africa. A syrup is a convenient vehicle for the administration of the drug to children, but it was thought that a tablet preparation would be more suitable for the treatment of adult populations overseas.

Methods

Field trials were carried out in a highly endemic area of Tanganyika in the neighbourhood of Kasulu. Patients were selected from out-patient departments, a school, and a native village, on the basis of direct microscopical examination of the stools in diluted Lugol's iodine. Only those showing numerous ascaris eggs of normal appearance were selected for treatment. Piperazine citrate was given in the form of tablets, each equivalent to 0.5 g. of the hydrate, and were swallowed with a draught of water. No restrictions were imposed upon the intake of food or alcoholic beverages, and no purge was given before treatment. Each patient was given a carton in which to place any worms passed with the stool, and was instructed to return with them. A second stool examination was made, where practicable, five or seven