while holding a loop of cord attached to either end of the board, and by his sound foot's positioning the board. In this way he learns and acquires the sensory aspect of and element in the sensory-motor association of thrusting the heel of the weak leg towards the vertical board. This board is valuable: it holds the bed-clothes off his feet, while it is held down by the weight of the clothes. A horizontal member at either end of the board helps to hold the board upright.

The strength of the patient's foot actions need only be small. Co-ordination and the sensory-motor association are the aims: these are encouraged, if the index finger of the sound hand feels the proximal border of the patellae, as they begin to move.

CONCLUSION

The essential feature of this neurological approach to rehabilitation of the stroke patient is its impact on rehabilitation of his mental abilities. The latter is encouraged by the linking up under favourable working conditions of numerous sensory-motor associations.

This mental rehabilitation approach applies also to other geriatric cases. It is not just a flash in the pan. It was explained in my book on *The Adjustment of Muscular Habits* (1933) and Sir Wilfred Le Gros Clark pointed out in his Foreword thereto the importance of the psychological elements in this type of self-help by which the patient encourages himself to continue his progress.

This article has discussed some practical methods by which the patient can be taught to gain control of sensory-motor associations despite the unfavourable items in his sensory field. They can doubtless be extended and improved by others. The essential feature of this neurological approach to rehabilitation of the stroke patient is its impact on rehabilitation of his mental abilities.

As the general principles underlying the foregoing remarks and recommendations were discussed at length in my last little book *Natural Movement* (1962, Lewis Lond. 103 pp.) and were found in the works of the numerous well-known authorities quoted therein it is unnecessary for me to repeat them here.

Giving those Fibrocytics the Bird (and other Treatments)

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Many are the vicissitudes in giving children with fibrocystic disease treatment with the Bird respirator, and its aftermath of "coughing and spitting". I have been on this job for over a year now, and have learned many precious points in this time.

The object of this article is not for the benefit of those wishing to know the whys and wherefores of coping with the actual down to earth handling of the Bird respirator itself, or any other type of treatment. On the contrary, my whole idea is to present the psychology in coping with each specific case under treatment.

I have found these children on the whole plucky, intelligent, curious and last but by no means least, obstinate to the last frustrating degree. Of course there are exceptions to every rule, but I myself, in the 14 years I have worked at the Children's Hospital have met only two exceptions to this overall description.

Let me explain here that, although I have only been giving these children treatment with the Bird respirator for just over a year, I have sweated my heart out with other forms of treatment prior to the introduction of the Bird.

Whatever treatment I have given, I have found their obstinate trait the greatest stumbling block and have learned to tread very gently in this respect. At the time of writing, there is no known cure for this devastating disease, so these children have to look into a future where "coughing and spitting" is a perpetual and daily MUST.

I have found that the most effective attitude to adopt is a taking for granted that they cough and spit just as routinely as they clean their teeth and do their hair.

Playing games takes up time and becomes boring—"Fancy coming all this way to play when I can play much more happily with Egbert next door!"

Thumping and banging and postural drainage, etc., are all very well and very orthodox, but, after all, the main issue is the *amount* of sputum raised and this they *must* do themselves. By the time one has thumped, breathed, percussed, exercised, played games and given the Bird, you are not likely to raise the same amount of sputum and the treatment would not be much short of a life stretch.

The Bird inhalations make coughing easier and quicker, so I concentrate on this. Mother can, after being coached, do the percussion and postural drainage at home. If she is not co-operative about this, you might as well cut your losses for she probably will not be regular in bringing the child either, and your occasional odd treatments would be like taking a thimble full of water out of a fish pond.

So now, with a really co-operative mother doing her stuff at home, I make my part of it a routine. I sit the child down in front of the Bird and, regardless of snot and trane let them know that they have to breathe in their airbron in the most efficient manner to the last drop and then cough and spit 20, 25, 30 times, etc. I gradually raise them to about 50 "spits" a time.

This, with mother's homework, seems to keep them fairly clear. Of course, this is no rigid rule and some are definitely dry before 50, and others can do more. However, whatever I feel each child is capable of, I stick to through thick and thin until they knuckle down to the fact that the sooner they get going and finish, the sooner they can go home.

It is useless to relent or break your rule—they have you under their thumb for evermore—"you let me off last time. Why can't I go early today?" "You only made me do 20 spits last April when I should have done 25, why can't you let me off 5 today?"—(it now being December).

It is useless to threaten. You can visibly see their expression change and get that closed, obstinate look, and woe betide you if you persist, for once they have said "Alright, now I won't cough", you might as well write them off as a dead loss for the rest of the time.

One needs patience and a nonchalant air with regard to time. I have had them going through various stages of boredom and grief for up to two hours (with me biting my nails metaphorically at the backlog of my other work) but, after seeing that I can outsit them, and am prepared to do so cheerfully, they usually settle down pretty quickly to a routine with an occasional bad day now and then, which, after all, is a common thing with most of us anyhow.

The bargaining technique can be used to great effect in various ways. For instance, I find out that they like being read to and so I strike my bargain—they breathe with the Bird while I read and when I reach the bottom of the page, they must cough so many times. This works well for the too chatty type, who keeps taking the mouthpiece out to ask a question or to start up a conversation. They will breathe well all the time they are being read to, and will quite cheerfully start coughing as soon as I reach the bottom of the page (which they check up on) regardless that I have stopped in the middle of a sentence.

Another popular bargain is to draw something. "Alright now, Ernolphus, what shall I draw?" "A cat." "Alright, you breathe nicely while I draw a cat and then you must cough five times." This is not always so good—Ernolphus is the critical type and does not feel that your cat deserves five coughs, and has no compunction in telling you so. Not having a great opinion of my arty ability, I probably agree wholeheartedly with him and the best thing then is to humbly ask him how much he thinks it is worth, and gracefully lower your standard. The next thing to be drawn however, you play hard to get—"You want me to draw you a house, but a house is much more difficult to draw than a cat and you only spat three times for a cat. If you want a house I must have five coughs *before* I draw it".

Ernolphus is willing, and so we progress.

A lot of these children take a great interest in the sputum raised, especially when they are going through a bad patch with violent fits of coughing which end in their vomiting anything they may recently have eaten. When this happens, you must naturally be interested too, and the following type of conversation then takes place. "Look, Miss B., you see that green stuff there?" Me, taking a quick look and feeling green myself, "You mean this here or that there?" "No, this dark green part—that's my capsule." Me— "Oh, my goodness, what a shame, are you sure it isn't pudding?" "No, that red bit there is my pudding—its jelly".

"Revolting" you say with a shudder, and I heartily agree, but after one has badgered them to cough, when you know that once they have started, they go on and on uncontrolably, the least one can do is show a healthy interest in the result.

I have one patient who almost invariably comes in eating an icecream. "Oh, for heavens sake, Hildegard, you know you are going to lose that any minute now. Why couldn't you wait and have it afterwards?" "Oh, I don't mind, after all once I've had it, it doesn't matter what happens to it." So then, naturally, it becomes a matter of amusement on her part to produce the icecream, and a matter of shuddering horror on mine, when she does so.

Then there is the business-like type who likes to know exactly where he stands "How many must I cough today?" "Well, last time you coughed 45. I think today we shall do 50." This is considered and agreed upon and he will cheerfully do his 50, but will go into the most ghastly contortions, eyes popping, cheeks bulging, hands pressed to mouth, in a desperate attempt to stop that 51st spit that has crept up on him involuntarily. Handing him a tissue instead of the mug sometimes does the trick, it being tacitly understood by both of us, that spitting into a tissue is quite useless and can on no account be counted. Others end up by swallowing it and announcing this with a "one up on you" note in their voice.

One becomes very interested and attached to these children, perhaps because one has so much to do with them over such a long period of time, and they are really a little race apart. Even when they are in the last stages and gasping for breath, they can be so game and interested and always so full of guts.

Really, the more I write about them, the more delightful and amusing I find them. It is a great challenge to treat them. I give one piece of advice to those who might be considering taking to this type of work, however. Be sure you have the necessary patience, a most unusual and rather lewd sense of humour, and above all, a strong stomach!

Book Review

PHYSIOTHERAPY IN OBSTETRICS. By Maria Ebner.

Third Edition. Publishers: E. & S. Livingstone Ltd., Teviot Place, Edinburgh. Price 22s. 6d. in U.K.

This is, in fact, another edition of a book well known to physiotherapists, namely *Physiotherapy in Obstetrics and Gynaecology*, by Helen Heardman. It sports a very pleasing new dust cover, and retains most of the illustrations from the original Helen Heardman edition.

It is, of essence, a widened view of the previous two editions, and includes chapters by Mr. R. R. Macdonald, Senior Lecturer in the Department of Obstetrics at the University of Leeds, on The Mechanism of Labour, Endocrine Function in Normal Pregnancy, Deviations from the Normal During and After Labour, and The Use of Analgesics and Anaesthetics.

It will be seen from the title, that the third part of the second edition of this book, viz. Physiotherapy in Gynaecology, has been intentionally omitted, Mrs. Ebner confining herself purely to the obstetrical aspect.

This book is to be thoroughly recommended to all physiotherapists interested in the subject.

ROSEMARY HARTE, M.S.C.P.

Book Received

FOUNDATIONS OF ANATOMY AND PHYSIOLOGY by Janet S. Ross, R.G.N., R.F.N. and Kathleen J. W. Wilson, B.Sc., R.G.N., S.C.M.

Third Edition

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For Review later.