

is really the chief technical library and reading-room of the Metropolis. It contains about 100,000 volumes of a scientific nature, including the best encyclopædias and dictionaries, and the British and foreign patent specifications, all of which are accessible to the visitor himself, for they are simply arranged in groups according to the different subjects round the bays of the hall, and thus no time is lost by a visitor in consulting a variety of works bearing on the same topic. In the middle of the room the home and foreign periodicals of a technical kind are laid out upon tables for the benefit of students.

Quite lately the accommodation of the reading-room has been much increased, for the number of readers is growing, and since the new Patent Act came into force, more space is required for storing blue-books and their indexes. The blue-books are kept apart from the library proper, and the indexes are filed on

writing-tables in the middle, where they are consulted by those about to take out new patents and who wish to find out what has been already patented. Others again come to search the records for legal purposes, in connection with the law courts, where some technical case is being decided. A few come to inquire into the validity of an invention. Within the reading-room proper, there are many inventors who like to read the technical press, to gather hints for some new apparatus, or merely to learn what is going on in the world of applied science. Occasionally, but not often, a well-known man of science pays it a flying visit in order to see some book which is not in the lists of the British Museum or the library of the Royal Society; but for the most part the attendants are regular *habitués* who have found out the merits of the place, and come there either in the course of business, or for their own self-improvement. It is certainly a boon to the evening student.

A CROOKED SPINE.

BY A FAMILY DOCTOR.



It is a generally received opinion—and one which is firmly adhered to—that the heart of a physician—and more especially that of a surgeon—must be a hard one. And yet I take the liberty of differing from those who hold it. The very nature of a surgeon's employment, his experiences in hospital wards, his familiarity with accidents of every sort, that appal all save him, his being constantly a witness to the effects of pain

and sorrow in others, to the contracted brows, the pale, pinched face of the sufferer himself, the teardamp, anxious faces of the friends and relatives near him, would, it may be but natural to imagine, render his feelings callous, and blunt every sense of pity. Yet my acquaintance with some of the greatest operators of the day affords me proof that it is quite the other way, and that surgeons have as often as not to assume a sternness they are far from feeling, and hide the workings of their gentle natures under a cloak of grim imperturbability, which is, in nine cases out of ten, put off and on with the gown in which they perform their unenviable duties.

When ill, one expects quite a fund of sympathy from his family physician, nevertheless; and seldom indeed is disappointment the result of such expectation. In the doctor standing or sitting quietly, thoughtfully by the bedside, something of the unselfishness, self-denyingness of the parson is looked for.

He may be a man who has his own sad burden of troubles and sorrows to bear, but he must not show it by word or look. While listening to the patient's plaint, he himself may be suffering pain—too often is, in these hard-worked times—yet his face must be as calm, though not so cold, as that of the Sphinx. Doctors, it should be remembered, are neither more nor less than human beings, after all, and therefore there are some complaints they listen to with more patience than others—for trouble must be genuine before it touches a chord of pity in the physician's heart. Mere querulousness or peevishness is little regarded: a long story about aches and pains is more likely to weary him than elicit a word of sympathy. Perhaps there is no class of cases that appeals more directly to a physician's best nature than that in which the patients are patient, silent, bed-ridden or chair-ridden children; and many of these, whom we meet down at the sea-side in summer being wheeled about in their out-door cots, are sufferers from the trouble I have a few words to say this month about—a crooked spine.

Well it is, indeed, for such young folks that they have kind friends about them, who can afford them the few luxuries their sad position in life demands, as well as the curative and palliative appliances which modern surgery has invented for their behalf. There are thousands of others, alas! who are not so blessed. Yet, at their very best, the lives of such sufferers are woeful enough to think of. The sun may shine with joy-imparting brightness, but they cannot go and play as do other children; the lawns may be green and daisied, yet the pleasure of rolling upon earth's soft carpet is denied to them; they cannot chase the butterflies nor gather the wild flowers, nor sit on the

sand that looks so temptingly soft, and with which so much may be made and done; and the waves that ripple on the beach in lines of silvery foam must sing to them a far sadder song than it does to the brown-legged, happy little ones who wade in the surf. In their lives those afflicted ones are utterly dependent on those around them. It is a blessing indeed that, with few exceptions, they are children of gentle dispositions, sensitive enough as a rule, but very easily pleased, living in nature, and grateful for favours done: at times a little peevish and irritable—who can wonder?—but far more cross with themselves for being cross, than with those whose feelings they think they have hurt.

Now, in this short paper, I desire to give no information that can in any way clash with the duties and advice of the attendant surgeon or physician. Apart from this, however, there are many things that parents would do well to make themselves acquainted with as regards the real nature, the prognosis, and the rational treatment of what medical men term *angular curvature* of the spine.* Indeed, I doubt whether more ignorance prevails amongst the general public about any other ailment than this.

Well, there is no man—or woman either—I suppose, who does not know that the spine, or spinal column, consists of a chain of bones, movable the one upon the other in such a way as to render the whole flexible at will. I need not, therefore, I believe, burden my article by giving illustrations of the spinal column, either in health or disease, otherwise than verbal. Imagine the "back-bone," if you please, to be represented by a string of buttons. The string itself would be the spinal marrow, connected with the brain, and giving off nerves for the government of movements in the trunk and limbs, and each button would be a vertebra. The vertebræ are joined together by ligaments, and between each is placed what is called a fibro-cartilage, which in youth is elastic; and it is the semi-ossification of these that gives to old age the stiffness of back characteristic of that period of life. If the reader imagines a softish pad like, say, a corn plaster, to be placed between each button on the string, he has a rough but fairly good model of the human spine. Now, holding the buttons and pads pressed well down upon each other, it is evident you can bend the whole string gracefully, like a bow. This is what takes place when a healthy man or woman bends the back; the curve behind is perfect—it is part of a circle. But suppose you apply some acid to the front portions, for example, of the few corn plasters about the centre of your string—something that will corrode or eat a part away, and perhaps even a portion of the buttons too—is it not evident that the buttons will fall down towards each other at that side, and your string, instead of being a straight one when held up, will be deformed and angular? And something akin to this has taken

place in the spinal column of our little friend who lies in yonder invalid-chair. The bones or intervening fibro-cartilages in his back are not whole: they are in part eaten or corroded away by disease, very likely the deposit of tubercle—yes, the reader guesses rightly: the same product, or one akin to it, which if deposited in the lungs would cause so-called phthisis, or consumption. I wish this fact borne in mind. The bones—say three—have become thinner in front at some particular part of the spine; it may be three, five, or six that are affected. The cartilages I spoke of and compared to the corn plasters in the string have also been disorganised and eaten away, and hence the curvature. Compression of the spinal marrow itself, I am happy to tell the reader, seldom indeed takes place: if it did so, we should have paralysis.

Now a word or two about the symptoms, because, if treatment is to be successful, the sooner the nature of the ailment is discovered by parent or nurse, the better; and this is most essential.

Crooked spine, then, occurs for the most part in strumous children. When the curvature is so marked as to attract the attention of the parents, when it is really visible to the sense of sight, there is no mistaking the disease for anything else, and the belief is generally expressed that the little one has had a fall or mischance of some kind, and has injured the spine. This may or may not have been, for although injury might encourage the deposition of tubercle in any particular part, it is readily enough deposited in certain situations without anything accidental having occurred. But before the actual deformity is visible to the non-medical eye, other symptoms will be noted: the child will be pale, and soft, and sickly, and subject to pains about the chest and stomach. Sometimes a boy or girl in the earlier stages of this complaint will have an old or old-fashioned look, and the mind is often highly developed at the expense of the body. This is, of course, not invariably the case. The child, however, early evinces a weakness in rising up from a chair or lifting itself up in bed. There is a peculiarity in gait too, the desire being to save all weight from resting on the spine. The hands will therefore be freely used to aid motion forward, the child catching at things for support, while the head even will be borne on one side. In addition to this, we have generally stunted growth, difficult action of bowels, coldness of extremities, and disturbed sleep.

I may here warn parents, and I may add teachers, against the dangers of permitting delicate children to sit long in the same cramped position at the desk, or in any kind of position that causes weariness or back-ache. There always are a few of such children at every school, and they ought to be looked after kindly.

I am describing the crooked spine as if it were wholly a disease of childhood, but it is not so, for angular curvature may take place in adults also. Here again let me give a warning. No one can form any idea of the number of men and women, young and middle-aged, who make a living in this country by bending over the writing-table. Cramped positions of this sort never fail to injure the bodily health in some way or

* *Lateral curvature* is a deformity of the spine in young people caused by relaxation of the muscles, and treated by improving the health, by rest and mechanical support.

other, so that pen-people cannot be too careful to maintain as far as possible the upright position while at work.

Where diseased spine has made a certain amount of progress we generally have the formation of an abscess, and the case has then assumed a far more dangerous character.

The *prognosis* has reference to the continuance of deformity and to the danger to life itself.

As to the first, if the reader will note what I said about the eating away or corrosion of the bones in front, it must be evident to him that the deformity is incurable; and here I give *another warning*:—No one who has a crooked spine should attempt to undergo any straightening process by the use of apparatus without first consulting a doctor, or inflammation of the spinal cord and death may be the results.

Secondly, as regards the danger to life from the disease. If the curve is very long, there is much decay of bones, and the danger is great. If the spine retains its straight position danger is also great, because ankylosis, or a growing together of the bones, is impossible.

The Treatment.—Luckily, we have many excellent hospitals in this country, and therefore the poor, suffering from acute diseases of the spine, have a chance of recovery.

As to those in better circumstances of life, while informing parents that they must place their ailing one as soon as possible under medical treatment, I have also to tell them that the doctor and they must go hand-in-hand in the treatment, else all will be

wrong. Early attention to the little patient's trouble, as I have already hinted, is of *paramount* importance.

Having consulted a doctor, he will naturally turn his attention to means calculated to obviate or cure the blood condition of the system on which the deformity depends. For this purpose he will prescribe tonics such as are suitable, with no doubt cod-liver oil and alteratives of some sort, and he will recommend residence in the country where the air is pure, or by the seaside where it is ozonic and bracing.

At the same time he will enjoin rest in the prone or horizontal position.

Rest is of the highest importance, and the position recommended will have to be maintained for many, many months. This seems sad, but then life is sweet. Even after the arrest of the disease, and when—ankylosis having taken place—the patient is at length permitted to get up and walk about, an apparatus must be worn to completely and perfectly support the trunk.

This apparatus is of several different forms, and the choice must be left to the medical attendant.

I hope, then, I have so far described the nature and treatment of disease of the spinal column as to show parents what they may or may not expect if one of their children should be afflicted with spinal complaint. Nor do I lay down my pen without giving hope. The ailment is *dangerous*, I plainly tell you, but it is also curable.

But so much, so *very* much, depends upon the persistency with which scientific treatment is carried out. Pray do not forget that.

TREASURES UNDER THE SEA.

"Methought I saw a thousand fearful wrecks;
A thousand men that fishes gnaw'd upon;
Wedges of gold, great anchors, heaps of pearl,
Inestimable stones, unvalued jewels,
All scattered in the bottom of the sea."



THE above lines are from Clarence's dream in *Richard the Third*, and were first published about 300 years ago. They form a theme on which many a vivid tale of shipwreck might be written. Few of us can form the smallest conception of the vastness of the treasures which the

sea has entombed. Public opinion has, however been recently called to the subject by the successful floating of a company, formed for the purpose of recovering treasure of two French ships, one *L'Orient*, a line-of-battle ship, blown up by Nelson at the Battle of the Nile, and the other the *Maza Mundo*, a large transport: both wrecks sunk in Aboukir Bay. The result of this adventure is being watched with deep interest, and if successful, will assuredly lead to many similar expeditions. It seems, therefore, a convenient opportunity for drawing attention to some curious particulars concerning the recovery of specie and other valuables lost at sea by battle, fire, or tempest, together with some instances in which money has been left to the next-of-kin of persons believed to have been lost at sea.

The first of the two ships above referred to (*L'Orient*) is stated to have had on board specie of the value of no less than £600,000, besides other treasure, the spoil of a raid on a Roman Catholic Cathedral at Valetta, and an immense quantity of other valuables.