NOTES ON LONG SEA-VOYAGES FOR CHEST-DISEASE.

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THE influence of climate in the treatment of chest-disease is a question of such world-wide interest, and on which such a diversity of opinion exists, that data from various sources are desirable, in order that general principles may be established. Dr. Theodore Williams, in his Lettsonian Lectures, published in the early numbers of the BRITISH MEDICAL JOURNAL for this year, has summed up the whole question, and has given statistics showing the results of treatment by climate in various parts of the world, and of treatment by long sea-voyages. Personal experience of this latter method induces me to contribute a few notes on some points which have occurred to me whilst perusing the above-mentioned lectures.

The voyage to Australia or New Zealand and home, round Cape Horn, is now so well known that it is quite unnecessary for me to give any particulars regarding the course, the temperature, the hygrometric and other conditions attending it; but some misconceptions seem to exist as regards the objects and results of such voyages, and to them I wish to direct attention.

Most persons who take such a voyage seem to consider that one important element of treatment is a stay more or less prolonged in some port at the antipodes. The effects of such residence will vary with the time of the year, but there seems to be only one opinion as to the injurious effect of a prolonged stay in Melbourne during the summer months. Whatever opinion may be held as to the controverted question on which Dr. Bird, on the one hand, and Dr. Thompson, on the other (*vide Dobell's Reports on the Progress of Medicine*, 1870), have written, there cannot be two opinions as to the injurious effects of the hot dust-laden winds blowing from the north over heated land direct from the tropics, and the high temperatures (sometimes considerably over 100 deg.) which are not unusual during the hottest weeks of summer. Most delicate persons feel considerable exhaustion as a result of the high temperature, and cases of phthisis, if at all advanced, frequently get worse very rapidly. Many patients feel the heat of the tropics even at sea, and on the outward voyage when becalmed near the line, even if well to the westward, away from the hot African coast, the loss of appetite and the excessive perspiration produce a degree of exhaustion and loss of weight which are not recovered from for several weeks. Such patients should be cautioned against making a long stay in any port where a high temperature may be expected. Melbourne presents every advantage as regards facilities of locomotion: excursions can be arranged to New Zealand, to Tasmania, to Sydney, to Adelaide, etc., and thus the whole time which would otherwise be spent on shore in Melbourne may be passed at sea in travelling about from one port to another. The voyage to Australia should be considered as a method of treatment by long sea-voyage, and nothing more; it should be the object of the patient to spend all his time at sea, if possible, and this he can easily do in the way above suggested.

Too much is sometimes expected from the voyage out, whereas, in many cases, the homeward voyage seems to be much the more beneficial of the two. Outward bound, there are many disadvantages to be surmounted: soon after starting, sea-sickness may impair the strength (in ordinary cases, in sailing ships, this is not much to be dreaded); no sooner is this recovered from than the tropical heat tends to induce exhaustion and loss of weight. Further on, south of the Cape, cold and wet weather may cause bronchitis, and this is not likely to be recovered from till after arrival in port. Homeward bound, leaving Melbourne in January or February, fine and warm weather may be expected for the first three or four weeks, after which the dangers of cold weather whilst rounding Cape Horn are braved with impunity, and the remainder of the voyage tends to establish the cure which the commencement of the voyage has inaugurated. The risks of Cape Horn seem to have been somewhat exaggerated, but experience varies much in this respect. The time of the year and the character of the season will account for the discrepancies of different observers. The lowest temperature observed by myself on March 12th of this year, in latitude 59 deg. and longitude 69 deg. (nearly that of Cape Horn), was 41 deg.; whereas, on the outward voyage, a temperature of 39 deg. was observed off the Cape of Good Hope at the end of November last. If the time of starting from Melbourne be such that cold weather may be expected, and, therefore, danger be apprehended from rounding Cape Horn, the return voyage may be performed by some ship coming home *via* the Cape of Good Hope, sailing either from Melbourne or from Adelaide.

The evils of being "laid up" at sea are not sufficiently appreciated. Many patients are sent away to sea as a *dernier ressort*, after most other methods of treatment have been previously tried and much time lost. It cannot be too strongly enforced that this kind of treatment should be adopted in the earliest stages of lung-disease; but, if any active disease exist, if the general health be much impaired, if pyrexia be present, it becomes a very grave question to decide on the advisability of a long voyage such as that to Australia is. The miseries of being confined to one's cabin, and the discomforts likely to arise from inability to take care of one's self, are such as no one would care to endure a second time. No one should undertake a voyage alone who is likely to become dependent on ship-servants and strangers; if there be the least probability of such an event, the patient would do well to stay at home. The uncertainty of the effect of the voyage should always be borne in mind, and allowance should be made for the exhausting effect of sea-sickness and tropical heat; it should also be remembered that the voyage is a long one, and, when once commenced, the experiment must be completed regardless of results, for there are no halting places. Acute disease of all kinds is a calamitous occurrence to passengers at sea: treatment is always more or less unsatisfactory; the hygienic conditions, and the difficulty of obtaining suitable diet for invalids (ship cooks have routine daily work, and extras are apt to be very indifferently prepared)—these circumstances, together with the absence of friends and the anxiety as to the patient's life being prolonged sufficiently for him to arrive in port, render it necessary that caution should be exercised in advising long voyages, so that all those cases may be carefully excluded in which there is any risk of the patient being invalidated. For such patients a shorter voyage may be advised, as, for instance, that to the Cape. Should the health improve, the patient can then, according to circumstances, continue his journey by sea, or else he can try the effect of mountain air by visiting the high lands of South Africa, which have of late been so strongly recommended. In this way is avoided the complete isolation of the invalid from all his friends, such as the three months' voyage necessitates, and in this way, too, treatment can be modified now and then, according to circumstances.

Dr. Theodore Williams's statistics speak very strongly in favour of the benefit to be derived from life at sea: any treatment which gives a percentage of 89 improved, and only 5½ stationary and 5½ worse, must be considered as eminently satisfactory as contrasted with all other methods. My own limited experience would lead me to the opinion that, in all cases where tuberculosis or destructive lung-disease is suspected, but where no active mischief yet exists, the sea-voyage should be resorted to at once: delay is superlatively dangerous.

AN IMPROVED FORM OF PESSARY.

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IN the treatment of diseases of women among the poorer classes, we meet with a large number of cases, for the relief of which Zwanke's pessary is the best adapted. I allude to those in particular in which the uterus has been completely procident for a length of time, where there is an absence of support in the soft parts, no fat, and frequently but little or no perineum. All the varieties of Hodge's pessary (especially Greenhalgh's improved form with bars) are tried; but directly any force is exerted upon them by straining or coughing, they are immediately expelled, and the only pessaries which are likely to be retained, are either the trumpet-shaped with braces attached, or Zwanke's. The former is, as a rule, strongly objected to by the patient on account of the braces; while the latter is almost always declared free from discomfort, and there is none more popular among this particular class of women. But every variety of Zwanke's pessary hitherto in use has its objection. Speaking of them as a body, it is said they are dangerous, as liable to give rise to pressure upon the soft parts, causing fistulous communication with the bladder and rectum. Such is certainly the case if they be left in for any length of time without removal, but such a complication is impossible if, as should always be directed, they be removed each night after retiring to bed, and replaced in the morning before rising. The real objections are, however, with regard to the material of which the pessaries are constructed, and the mode of fastening. First, there is that form which is kept together by means of elastic tubing. This is the most objectionable variety of all, though largely employed on account of the price. The India-rubber is sure to split sooner or later; and, under any circumstances, it becomes full of and sodden by the secretions, and, therefore, extremely fetid.

A better form is that made of vulcanite, which is fastened by means of a screw, but it is frequently broken by being overscrewed. The discharges get into the interstices of the screw, and it cannot be released, and often the adjacent hairs get entangled, giving rise to considerable pain; and so Zwanke's pessary with many has fallen into disuse. To obviate these objections, I have contrived a form of Zwanke's pessary, which has been manufactured for me, and registered by Messrs. Arnold and Sons of Smithfield, and it has already proved to be a very useful pessary. It is shown in the accompanying illustration.

The upper part is made of vulcanite, and is extremely cleanly, light, and durable. The lower portion or feet, employed for locking, is made of metal. Directly these feet come into contact, with the slightest pressure they lock, and they are as easily released by pressing with one finger upon the spring, and at the same time pushing the curved extremity down with the thumb. It may be suggested, that this portion will give pain by pressing externally, but this in practice will be found not to be the case. The patient walks about and sits down with perfect comfort. The expense—a very important item—is very little more than that of the cheapest form, while it will last out at least three or four of these. It is considerably cheaper than those varieties worked by means of a screw, whether made of vulcanite or metal.

NOTES OF A CASE OF EXTRA-UTERINE PREGNANCY: DISCHARGE OF FŒTUS *PER RECTUM*: STRICTURE OF RECTUM AND COLOTOMY.

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THE following case is, I think, of interest for several reasons: first, on account of the extraordinary nature of the primary injury; secondly, on account of the extra-uterine foetation; did the weapon which inflicted the injury to the rectum at the same time directly impregnate the left ovary? And, thirdly, on account of the difficulty met with in performing the operation of colotomy.

Mrs. X., aged 36, states that she was strong and well till her marriage in 1866. Her husband had formerly had syphilis, but was then well, except some ulcers on the legs. A week after marriage, she received a severe injury to the rectum, by which the bowel was probably torn about two inches above the anus. She was awakened from sleep, whilst lying prone, by a sudden acute pain in the rectum, and "feeling something give way", apparently in the middle of the pelvis. This was immediately followed by excruciating agony and severe hæmorrhage. She is certain that she could not have been more than a few days pregnant at the time.

During the next three months, she suffered much from pain in the neighbourhood of the injury; she was unable to turn in bed, and was very feverish; there was discharge of pus from the bowel and occasional bleeding. She then, after passing a sharp piece of bone *per anum*, gradually got better, and was able to leave her bed. About three and a half months after receiving the injury, while at stool, a large soft mass passed from the bowel with much blood.

Defæcation, which since the injury had always been painful, now became difficult, till, in the summer of 1867, the obstruction became nearly complete. She was again confined to her room; three fistulæ formed around the anus, and the constant discharge of pus and fluid faeces rendered the perineum so tender and excoriated, that she was unable to sit upright. She suffered also from constant wearing pain in the lower lumbar and sacral regions, and from such hyperæsthesia of the whole back, that she could not allow it to touch the pillows, but was obliged to lie on one or other side. Every ten days or so, her sufferings were greatly aggravated by a violent attack of straining, accompanied by incessant vomiting and sickening abdominal pain (? ovarian). Large quantities of purulent matter were then passed, together with solid much compressed faeces. Sometimes small pieces of necrosed bone were passed either through the anus or through the fistulæ, and also several small bones (some of which are in my possession), which appeared to be those of a foetus of about three months.

In this miserable state, the patient continued for about seven years. In the intervals between the acute attacks, she was just able to do needlework. When first called to see her, I found her spare, but not emaciated; though her face bore evidence of severe suffering, there was no cachexia, and she had a fair appetite. She said she had never had any sore-throat or skin-affection. On examination, I found a stricture of the rectum an inch and a half above the anus, firm, smooth, and unyielding, not admitting the point of the finger. The rectum was freely movable laterally, and the coccyx and sacrum felt normal. There were no nodules in the vaginal wall, but the upper part was thickened and tender; the structured portion of the rectum could be felt through it as a thick mass extending upwards for about an inch and a half. The fistulæ passed up by the side of the bowel.

As the stricture involved so much of the rectum, and appeared to be connected with abscess and necrosis above, I advised left lumbar colotomy, to which the patient and her mother readily consented. I accordingly operated in the usual way; but, on reaching the peritoneum, the colon did not come readily into view; it was unfortunately empty, and could not be injected. On opening the peritoneal cavity, however, a loop of colon slipped out, and the cause of the difficulty became apparent; the bowel was not fixed to the abdominal wall, but was floating freely, having a long meso-colon; it was quite healthy and firmly contracted. I opened it by a transverse incision, dividing at least half its circumference, and fastened the cut edges to the central part of the skin wound with four strong whipcord sutures and a few silk ones. I then brought the rest of the wound together before and behind with deep and superficial silver wire sutures supported by broad strips of plaster.

During the first week after the operation, the patient made good progress; flatus passed from the artificial anus on the third day, and well formed solid faeces on the fifth. But, on the seventh day, her troubles began. The wound became tense, and, when the stitches were cut, it gaped widely posteriorly, and several large sloughs of areolar tissue came away. The patient acquired a suspiciously earthy look; was very prostrate, and her temperature ran up to 104 deg., but there were no rigors. She had for several days complete retention of urine, necessitating the use of the catheter; her urine was highly albuminous, and slightly tinged with blood. Her mouth became excessively tender, her tongue and gums being swollen and covered with thrush, which proved most rebellious to treatment, and, by preventing the patient from taking food, almost cost her her life; she was only saved by the free use of egg and brandy mixture. Suppuration and sloughing extended from the wound along the areolar planes of the back, and retarded her convalescence; but the extreme hyperæsthesia from which she had suffered before the operation ceased long before the abscess had healed. About six weeks after the operation, cystitis set in, with much mucopurulent discharge, and a few days afterwards the urethra was obstructed for a time by the impaction of a necrosed piece of membrane of the size of a shilling. The patient said she had felt something give way into the bladder; at all events, the purulent discharge was greatly increased after this passed, and there was a feeling of relief in the pelvis, as if an abscess had burst.

Notwithstanding these drawbacks, the wound granulated well. Two months after the operation, the patient was able to get out of bed without assistance, and thenceforward steadily gained flesh and strength; but it was not till nearly four months after the operation that she was able to walk out, wearing a mackintosh bag attached to a tin frame shaped to the side. The wound had then firmly cicatrised, and presented two apertures, one above the other, on a level with the skin, and separated by a thick septum, so that there was no tendency for faeces to pass into the lower bowel. Pus continued to pass by the anus and through the fistulæ, and also passed up the colon to escape from the side. To obviate the straining, a recto-vaginal fistula was after-