

pansion the cause of the entrance of fluids during respiration, these would be ejected during inspiration and drawn in during expiration; this is, however, not the case. It appears to me that the diaphragm is the great discomposing agent in these cases, and that were it possible to confine the movements of this muscle, one of the greatest difficulties in the attainment of mechanical rest would be removed.

In the very tranquil breathing of sleep, fluids arise only to the top of the pipe, and I think that however small the tendency, yet the weight of a column of water fourteen or sixteen inches high *does* tend to approximate the roof and floor of an empyematous sac, and that this is an agency for good.

I have noted above that the portion of tube in the chest was not perforated laterally, and I am sure that when these holes in tubes exist, the granulations quickly spring up and enter the perforations, seriously invading the calibre of the pipe. In fact, the granulations lining the sinus grasp the tube so firmly as to effectually prevent the entrance of air into the chest cavity *outside the tube*, and this in a case where a portion of rib has been resected.

As to the fluids with which to irrigate, I found carbolic acid solution (1 to 100) absorbed so quickly as to give rise to black urine in two days. Condy's is a very much pleasanter solution to work with, and the degree of interchange between it and the fluids of the sac is shown by the rapidity with which the solution becomes decolourised. From boracic acid solution I anticipate good results, and there are many other antiseptics of a similarly unirritating nature.

It may be objected that I have written more fully on this subject than the experience of one case can warrant, particularly as in that case irrigation is still *sub judice*; but I shall have accomplished my object if I have in any way pointed out a treatment which may be useful in a class of difficult cases. I should not like to conclude without stating how much I am indebted to Dr. Drummond for his kindness in the above case, nor without expressing a hope that the result may prove satisfactory to his patient.

Newcastle-on-Tyne.

## ON FRAENTZEL'S ANTISEPTIC TREATMENT OF EMPYEMA.

By G. B. FERGUSON, M.D. OXON.,  
SURGEON TO THE CHELTENHAM HOSPITAL.

MR. MOXHAY having in THE LANCET of Jan. 15th narrated a case of empyema treated with noteworthy success after Fraentzel's method, as detailed in Ziemssen's Cyclopædia, I would wish to further place on record, to the credit of this method, two cases treated in the Cheltenham Hospital about eighteen months ago.

The first case was that of Annie M—, aged twenty-seven, who was admitted in July, 1879. About a year previously she had had pleurisy, followed by empyema, and had been treated in a great provincial hospital by aspiration, and afterwards by a drainage-tube. Nevertheless the fetid discharge continued, with temporary abatement only, and when first seen by myself she was exhausted and emaciated, was suffering from cough and hectic fever, was reported to be phthisical, and was not expected, at the utmost, to outlast a few weeks. Following Fraentzel's directions, a free incision, three inches long, was forthwith made anteriorly between the sixth and seventh ribs, and forty-five ounces of fetid pus were evacuated. A silver cannula was then inserted between the ribs, large enough to admit at once two No. 8 Jacques's india-rubber catheters. Through one was injected a stream of warm 1 per cent. carbolic lotion, which, with the residual pus, found its way out through the other, and this washing was continued till all was clean and sweet. The case being necessarily in some degree septic, the spray and formal dressings of Lister were omitted in favour of a simple gauze bag of carbolised tow, which was kept closely applied to the side. This washing process with carbolic lotion was continued twice daily for a fortnight; after which an iodine solution (tincture of iodine, two drachms and a half to one pint) was substituted for it and employed once daily. Speedily the discharge, which had already sunk to a drachm or so in a day, became quite insignificant, and the washing fluid from the first returned almost clear. After another month, there being still some

trifling oozing, a 5 per cent. solution of common salt was used for washing purposes, and the silver cannula was replaced by a small india-rubber drainage-tube. After three months in all she left, having discarded the drainage-tube and with a nearly healed sinus. Three months after leaving I saw her again with the sinus firmly healed, her cough gone, increased nearly two stone in weight; in brief, perfectly well.

The second case, that of Clara A—, aged seven, admitted soon afterwards under the care of my colleague, Mr. Bennett, was equally satisfactory. Here the history was successively of scarlatina, dropsy, pleurisy, and empyema. The empyema, however, was not allowed to discharge itself, but Fraentzel's method with full Listerian precautions was adopted, and a pint of pus was removed. The twice and afterwards once daily washings were duly continued, and after a month I read in the hospital note book that the discharge had almost ceased. Five months afterwards the same book contains a mention of the firmly healed condition of the resulting sinus and of the perfect restoration of the patient.

I trust I may be right in my surmise that few, if any, institutions in this country have been more prompt than the Cheltenham Hospital to adopt this notable advance in the treatment of empyema.

Cheltenham.

## TREATMENT OF EMPYEMA BY IRRIGATION AND ASPIRATION.

By JOHN LOWE, L.R.C.S.I.

I WOULD like, with your kind permission, to make a few observations on Mr. Moxhay's article on the above subject in THE LANCET of Jan. 15th.

Mr. Moxhay claims priority in this country for treating empyema by aspiration and irrigation with Listerian precautions. I have seen this method practised several times, and I have practised it myself with success in a case of empyema proper. In those cases which I have seen, as well as in the case under my own care, Listerism was observed with most scrupulous precautions, not as in the case which Mr. Moxhay reports, where, I should say, Lister's method was either not fully comprehended, or, to say the least, was most imperfectly carried out. To open a deeply seated abscess in the thorax, and then to irrigate with simple distilled water, some time after with iodine, and subsequently with carbolic acid solution (two grains to the ounce), is manifestly contrary to Mr. Lister's practice. Mr. Lister would have used an antiseptic solution in the first instance, and this is the method I have seen practised so successfully by others, and until we are more enlightened than we are at present, I shall adhere to the practice which common sense dictates. It is a misrepresentation of our most philosophical surgeon's practice to hold that perfect Listerian precautions were observed in the case referred to; nor do I believe that when two grains of carbolic acid to an ounce of water were used there was even an element of probability that such a solution would have any effect upon disease germs.

We occasionally meet cases that recover as quickly without antiseptic precautions as they could with them, and may not Mr. Moxhay's case have been one of these? At any rate, it would, I think, have been better if Mr. Moxhay had described the case with which he had to deal. For instance, the state of the patient's health, whether the collection of purulent matter was circumscribed, how long it existed, and other points of interest which a scientific intelligence would suggest. A circumscribed empyemic abscess existing for a considerable time is hardly likely to cease discharging quickly; nor is it good practice to drain off the whole of the fluid at once in all cases.

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EDWARD GOODEVE MEMORIAL.—The execution of the bust of the late Dr. Goodeve, for the Medical College, Calcutta, has been entrusted to Mr. Gellowsky, of Bruton-street. Mr. Gellowsky's name is well known in India as a sculptor. The busts of Sir P. L. Cavagnari, Sir Cecil Beadon, Dr. Oldham, Mr. Arthur Grote, and many others, came from his studio.—*Home News*.