

Summary

A case of coccidiosis in a Bengali who has never been abroad is described.

There was severe diarrhoea accompanied with abdominal discomfort, lasting for about a week.

Oöcysts were present in the stools for 18 consecutive days, although they were scanty, except during the acute manifestation of the disease.

Of the concentration methods employed, the one advocated by Willis (1921) for concentration of ova was found most suitable for the purpose.

Charcot-Leyden crystals were persistently present throughout the whole investigation.

No other cause apart from infection with the *Isoospora* could be discovered to account for the illness.

I am indebted to Lieut.-Col. R. Knowles, I.M.S., my chief, for his valuable suggestions and to Dr. K. Chatterjee for the history of the patient and the material.

REFERENCES

Cragg, F. W. (1917). Observations on Dysentery Cases from Mesopotamia. *Indian Journ. Med. Res.*, Vol. V, p. 301.

Cropper, J. W., and Harold Row, R. W. (1917). Method of Concentrating Entamoeba Cysts in Stools. *Lancet*, Vol. I, p. 179.

Knowles, R. (1928). *An Introduction to Medical Protozoology*. Thacker, Spink and Co. (1933), Ltd., Calcutta.

Sheather, A. L. (1923). The Detection of Intestinal Protozoa and Mange Parasites by a Flotation Technique. *Journ. Comp. Path. and Therap.*, Vol. XXXVI, p. 266.

Willis, H. W. (1921). Levitation Technique for Detecting Hookworm Ova. *Seventh Annual Report, International Health Board, Rockefeller Foundation*, 1920, p. 91.

SPONTANEOUS PNEUMOTHORAX

By R. VISWANATHAN, B.A., M.D., M.R.C.P. (Lond.)
Government General Hospital, Madras

Definition

THE name is given to the condition where air enters the pleural cavity spontaneously, usually as a result of the rupture of the wall of an alveolus.

As early as 1856 M'Dowell described cases of pneumothorax occurring not only in people with pre-existing pulmonary disease but also in apparently-healthy individuals. Cases have been reported in the literature from time to time, and, recently, Kjaergaard (1932) collected a series of 51 cases of spontaneous pneumothorax in the apparently healthy. I have seen several cases of pneumothorax in tuberculous patients, but recently I came across two cases in apparently-healthy individuals; reports of these cases are given below.

Ætiology.—In some rare cases it occurs as a very early sign of commencing lung lesion, but more often during the advanced stages of phthisis. It might also occur as a complication of non-tuberculous diseases of the lungs,

such as carcinoma, abscess, gangrene, or emphyema.

The occurrence of spontaneous pneumothorax in the apparently healthy is in all probability due to rupture of an emphysematous bulla, as shown in six of Kjaergaard's cases that came to autopsy. It is a matter for surprise that pneumothorax rarely occurs in general emphysema. The mechanism of production is something like this. A valvular opening connects the vesicle with a bronchiole in such a way that air can enter the vesicle but cannot leave it. The bulla gets more and more distended until it bursts ultimately, resulting in the free passage of air from the lungs to the pleural cavity. In most cases the opening closes as the vesicle collapses, and the accumulated air is soon absorbed, but if the valvular opening persists, and the integrity of the valve action is maintained, the interpleural pressure rapidly increases, causing considerable discomfort to the patient. If not relieved by repeated aspiration of air, the patient may die of shock or insufficient pulmonary ventilation. In some cases a fistulous free communication persists; in this case a permanent pneumothorax occurs which may cause no evident distress to the individual.

It is more common in men than in women, as shown by Kjaergaard, 36 of whose 51 cases were men. Thirty-six of his cases were between 20 and 40 years of age; 33 occurred on the right side, 17 on the left, and one was bilateral.

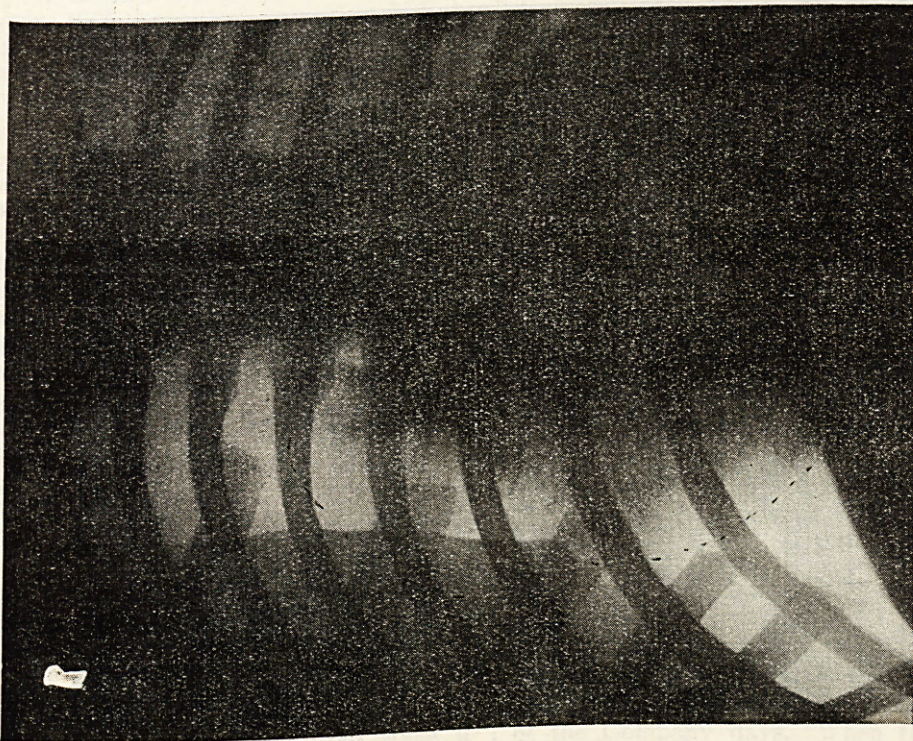
In both my cases the patients were men of apparently strong constitution 24 and 22 years of age, respectively. The right side was affected in one, and the left side in the other.

Symptoms.—It is quite probable that there are a large number of cases of pneumothorax in which the condition is partial; these go unrecognized owing to the absence of marked symptoms. In some cases of advanced tuberculosis with considerable pleural adhesions, partial pneumothorax might occur without causing any additional distress to the patient. Ordinarily when complete pneumothorax occurs spontaneously the patient complains of sudden pain on the side of the chest affected, with a varying amount of dyspnoea. If there is considerable increase of interpleural pressure with displacement of the mediastinum, there will be cyanosis as well. Rarely, death occurs as a result of shock or lack of oxygenation of the blood. Most patients make an uneventful recovery, sooner or later, as the air gets absorbed, but if one of the blood vessels also ruptures along with rupture of an emphysematous bulla, fatal hæmopneumothorax may occur, as in the cases reported by Rolleston (1900) and Newton Pitt (1900). Burrell (1932) is of opinion that if effusion complicates spontaneous pneumothorax, there is sure to be a pre-existing disease of the lung, most probably tuberculosis. In the apparently healthy, effusion hardly ever occurs.

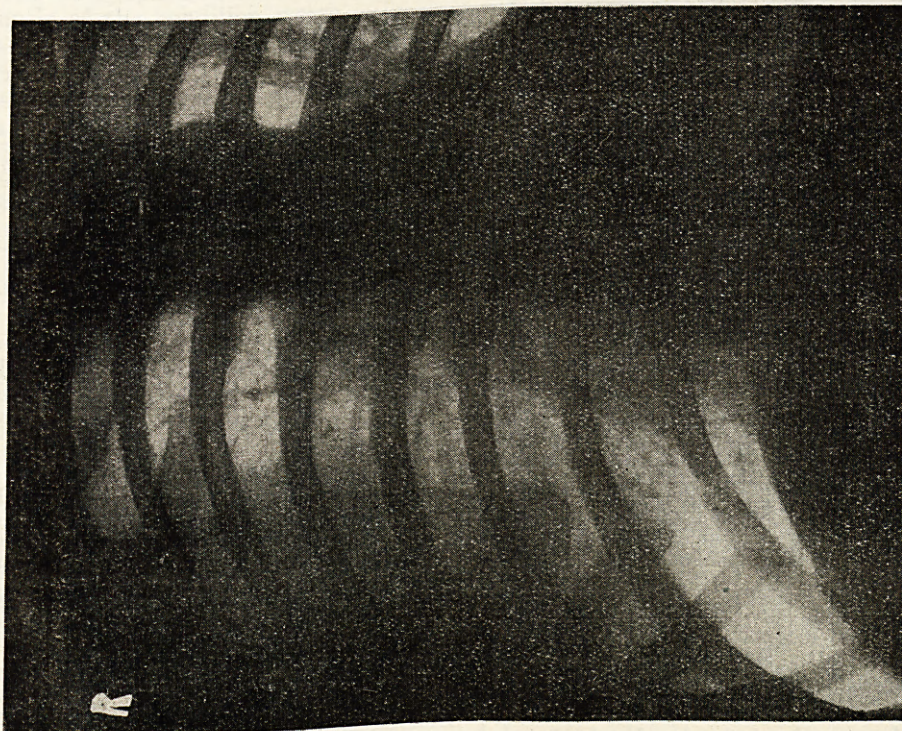
Both the cases reported below recovered rapidly and completely, as the x-ray plates show.

Case (a).—A medical student, aged 24 years, apparently in the best of health, had a sudden catch over the right side of the chest while bending back in the act of yawning. I saw him about twelve hours after the incident. He had considerable pain over the whole

of the right side of the chest, difficulty in breathing and inability to lie on the right side. I proceeded to examine him with the biased idea that it would be a case of pleurisy, but on systematic examination I found deviation of the trachea to the left, displacement of the heart to the left, absence of vocal fremitus and vocal resonance, with tympanitic note on percussion and absence of breath sounds on the right side. Bruit d'airain, so characteristic of pneumothorax, also was



Case (a) 2nd day.
The collapsed lung is outlined.



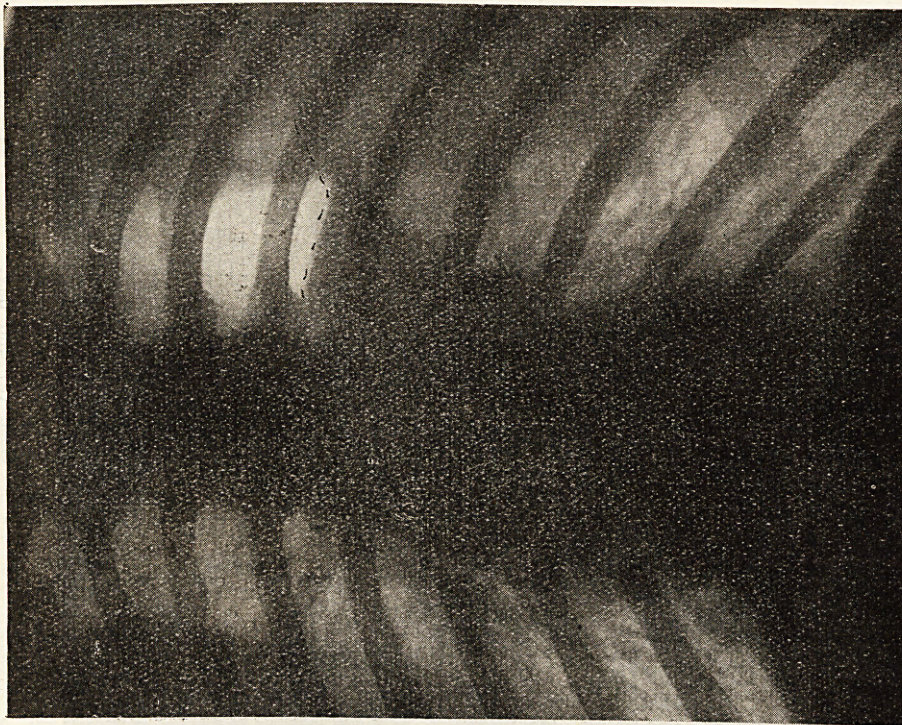
Case (a) 15th day.
After the lung had expanded again.

present. X-ray showed complete collapse of the lung on the right side. Owing to his being in distress, I removed one litre of air; this gave him almost immediate relief. X-ray ten days later showed almost complete absorption of air from the pleural cavity. The lungs were apparently normal, and he did not exhibit any symptoms pertaining to disease of the lung.

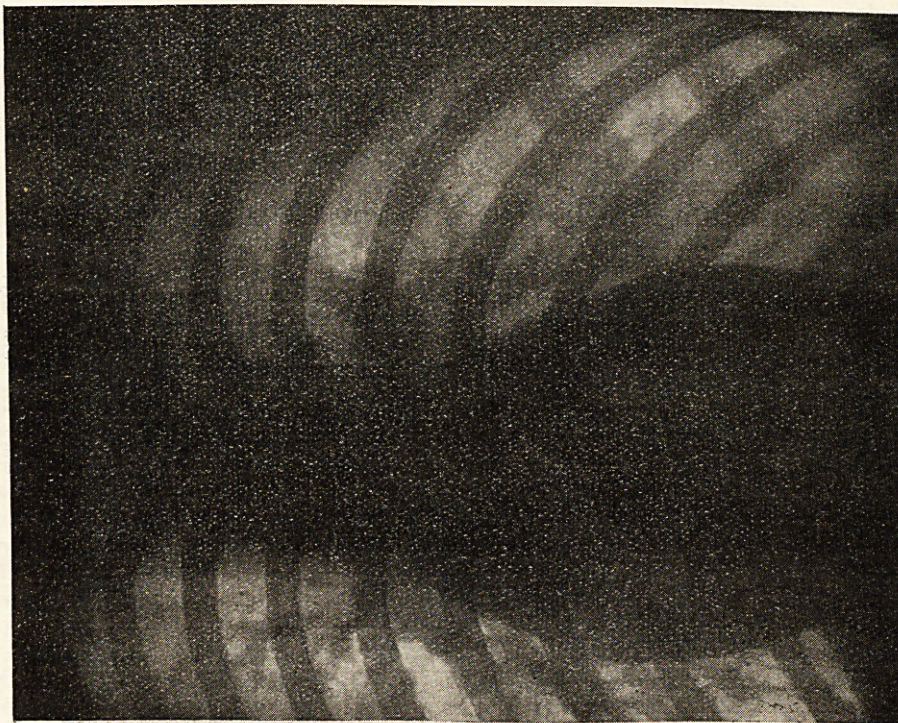
Case (b).—A deck-hand, aged 22 years, had a sudden pain on the left side of the chest during the ordinary

course of his duties. He was sent to the Royapuram hospital with a diagnosis of pleurisy with effusion, four days later. X-ray examination revealed partial pneumothorax on the left side. He had no distress whatsoever. He showed complete absorption on examination by x-ray ten days later. The lungs were apparently in a healthy condition.

(Continued at foot of opposite page)



Case (b) 4th day.



Case (b) 12th day.

THE ACID AND SANITOL TREATMENT OF THE INTESTINAL FLUXES

By F. J. PALMER, F.R.C.S.I.
LIEUTENANT-COLONEL, R.A.M.C. (retd.)
P. O. Hoogrijan, Upper Assam

IN 1924, the writer published a paper on the treatment of cholera by cresol, and in the following year, 1925, a further paper in which he described what seemed to him the better results

(Continued from previous page)

Diagnosis is easy when the pneumothorax is complete. Hyper-resonance with absence of breath sounds and displacement of the mediastinum to the opposite side are quite characteristic, it may be difficult if the air cavity is encysted as in advanced phthisis. If there is only partial pneumothorax confined to the upper portion of the pleural cavity, as in the second of the cases reported above, the relative difference in resonance between the upper and lower portions might lead to the mistaken diagnosis of pleural thickening or effusion at the base. X-ray examination, of course, will clinch the diagnosis.

The prognosis depends on the aetiological factor. When it occurs in the apparently healthy, recovery is certain except when it is associated with fatal shock, or fatal hæmorrhage. Pyopneumothorax resulting from rupture of an abscess will often recover after energetic treatment. When pneumothorax occurs in the early stages of tuberculosis, it may be considered as a desirable accident, since it will produce collapse of the lung. In the advanced stage it often results in pyopneumothorax which makes the prognosis of the condition worse.

Treatment.—If it occurs in the apparently healthy, no treatment is required, unless the patient is considerably distressed, when aspiration of air is indicated. In acute tuberculosis it is advisable to maintain the collapse of the lung with refills, but, if pyopneumothorax occurs, Burrel advocates aspiration and wash-out of the pleural cavity with Dakin's solution. In resistant cases obliteration of the cavity can be done only by resorting to thoracoplasty.

[Note.—Attention is drawn to the report on a case of pneumothorax, by H. W. Acton and Darmendra, in our issue of May 1933.—EDITOR, I. M. G.]

REFERENCES

- Burrel, L. S. T. (1932). Spontaneous Pneumothorax. *Tubercle*, XIII, 433.
Kjaergaard, H. (1932). Spontaneous Pneumothorax in the Apparently Healthy. *Acta. Med. Scandinavia*, Supp. 43.
M'Dowell (1856). On an Unusual Form of Pneumothorax. *Dublin Hosp. Gaz.*, p. 227.
Pitt, G. N. (1900). Rapidly Fatal Hæmopneumothorax due to Rupture of an Emphysematous Bulla. *Trans. Clin. Soc.*, XXXIII, 95.
Rolleston, H. D. (1900). A Case of Fatal Hæmopneumothorax of Unexplained Origin. *Ibid.*, XXXIII, 90.

obtained by the addition of acid to the cresol. This was followed by a third paper in 1928, in which the dosage of acid was somewhat increased, and sanitol recommended.

The sanitol used should be as fresh as possible, as when kept for some time, and especially if exposed to air, the solution, or, more strictly speaking, the emulsion, becomes of slightly brownish colour, instead of the milky-white emulsion formed when fresh sanitol is added to water.

When the mixture is of this colour it may be found that minute tarry globules appear on the surface shortly after the addition of acid, when the sanitol is quite fresh this only occurs after a considerable interval.

Why acid has not been used of recent years in the treatment of the more severe intestinal fluxes is difficult to see, but it was probably due to the fear of inducing acidosis, and this it was which at first deterred the writer, until he found it to be a more or less negligible bug-bear in such cases.

It has long been known that the cholera vibrio is susceptible to acid, as is also the food poisoning, the Salmonella, group, which is extremely susceptible, and the writer claims to have proved clinically that to these may be added the dysentery bacilli, and those other members of the great group of colon bacilli which produce so many of the infective diarrhœas.

The use of acid is no new thing for the treatment of diarrhœa. The old clinicians used it, and an acid mixture was, it is understood, in use for the treatment of cholera by the surgeons of the Company days. When the writer first came to India, quite an effective *mistura pro diarrhœa*, containing acid, was in the medical panniers of those days.

The clinical observations of these older physicians was sound, but their explanation that the good effects of acid were due to its astringent action was incorrect. The beneficial effects are due to the inhibiting effect produced upon the unbridled growth of the infecting organisms in the bowel.

The older explanation is still current, however, in many works on therapeutics and materia medica.

Since contributing the earlier papers the writer has gradually increased the dosage of acid, as he found his fears of acidosis more or less groundless. There is far more acidosis induced by an unbridled intestinal flux, than by the acid used in conjunction with a weak antiseptic to check it. During the continuance of the flux, the current is from within outward, and little absorption appears to take place.

It is now proposed briefly to recapitulate the treatment and explain the guiding principle, giving a résumé of its use in the various intestinal fluxes, with the difficulties encountered, and the results based on the experience of many years of treatment by one method, in many hundreds, if not over a thousand, cases.