marked degree of prolapse and ulceration of the cervix. At the time of the fifth labour the only trace of the external os was a slight linear scar. A case more closely resembling the one described here was recorded by Kanter and Klawans (1930). They reported a case of vaginal atresia occurring rapidly after an operative delivery. In such cases the pelvic floor and bladder are greatly relaxed, so that the anterior and posterior vaginal walls come to lie in close approximation. In their case a woman was delivered on June 15, 1929. The delivery was with forceps and without any anaesthetic; no attempt to repair any tears was made. The temperature and pulse were normal in the puerperium, but no lochia were passed after the third day. The patient was seen on September 30 of the same year. There was then found to be atresia of the vagina at the level of the entrance of the urethra into the bladder. In this case the degree of damage to the vagina was not known and strong antiseptics employed at the time of delivery may have played a part in giving rise to the condition. This case demonstrates well how quickly atresia of the vagina may occur and the strength of the septum so formed—sufficient in this instance to retain the lochia after the third day of the puerperium.

In Case II the exact aetiological factors concerned in producing the septum must remain to some extent obscure, even though the field of possible causes is considerably restricted. The history of previous labours, in itself, at first seems to exclude any congenital abnormality as a possible contributory factor, but this must be considered later. Some trauma to the vagina in the course of the previous labour might have been the starting-point of such a septum. If there were trauma, then one would expect it to have been fairly severe and to have produced symptoms not easily overlooked. Yet the previous labours and puerperia were normal and the only symptom was a slight and persistent vaginal discharge. If the septum began to develop soon after the second labour, then one would have expected some obstruction to the flow of blood at the periods. Unfortunately, the flow was always small, and no change was noticed except a slight increase in pain during the periods. This pain may point to some obstruction arising in the vagina.

It is thus apparent that although trauma and infection either jointly or separately were the responsible factors, yet there is no real proof of this. One is forced, therefore, to consider afresh a congenital theory. Perhaps there was a congenital narrowing or a partial septum present in the upper part of the vagina, and a degree of trauma and infection unlikely to cause trouble in a normal vagina were the final factors in this case. This view is supported by the type of septum found, which was well defined, remarkably thick and resistant, and did not seem to consist of recently organized granulation tissue. Further, the vagina below the septum appeared quite normal and there was no evidence of long-standing infection anywhere in the genital tract. The total disappearance of an orifice during pregnancy also offers a remarkable picture; it is of interest to consider how small or large it was at the time of conception. The increased vascularity of the vagina during pregnancy would no doubt accelerate the closing of the septum, provided the edges were not epithelialized. This case also illustrates the fact that the retention of the lochia after labour need not cause any anxiety. At the time of the Caesarean section the degree of sepsis was good, and in the absence of any infection the retention of a large volume of lochia for a considerable period had no effect on the temperature, the pulse rate, or the general condition of the patient.

BIBLIOGRAPHY

Case I

- Burt-White, H., and Armstrong, R. R. (1928). *Proc. roy. Soc. Med.*, 21, 542.
 Cathala, V. (1926). *Bull. Soc. Obstét. Gynec.*, 15, 551.
 Decosta, E. J. (1933). *Amer. J. Obstet. Gynec.*, 25, 557.
 Dorsett, L. (1927). *Ibid.*, 14, 247.
 Füh, H. (1923). *Arch. Gynäk.*, 119, 102.
 Mathieu, Albert, and Schaffler, Goodrich C. (1928). *Amer. J. Obstet. Gynec.*, 16, 390.
 Pettersson, A. S. (1923). *Mschr. Geburtsch. Gynäk.*, 63, 315.
 Phillips, L. (1927). *Proc. roy. Soc. Med.*, 20, 1659.
 Power, R. F. (1840). *Dublin J. med. Sci.*, 16, 34.
 Scott, P. N. (1821). *Med.-chir. Trans.*, 11, 392.

Case II

- Blair, R. (1927). *British Medical Journal*, 1, 1006.
 Croft, E. O., and Claye, A. M. (1928). *Lancet*, 1, 231.
 Kanter, A. E., and Klawans, A. H. (1930). *Amer. J. Obstet. Gynec.*, 20, 95.

UNUSUAL PHYSICAL SIGNS IN LOBAR PNEUMONIA

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Lobar pneumonia may present, in place of the classical physical signs, abnormal findings to confuse the diagnosis even when the onset, symptoms, and temperature all seem conclusive. These perplexing features would seem to require explanation, and this can be found only in the physiological and pathological changes in the underlying lung, since physical signs in themselves, even when taken in groups, are not conclusive proof of any particular disease. Thus the consolidation of pneumonia, due to alveolar exudate, is usually evidenced by dullness to percussion and by bronchial breathing, and these are the accepted signs of the disease. When alveolar exudation is complicated by bronchial filling there is produced a different group of physical signs—those of a solid lobe with a blocked bronchus. A complete absence of breath sounds is discovered, together with other signs suggestive of a moderate accumulation of fluid.

Three Illustrative Cases

A patient recently observed by us after tonsillectomy developed on the second day a temperature of 102°, dullness with absent breath sounds at the right base, and dullness with bronchial breathing at the left base, the apex beat not being displaced. Two days later an x-ray film showed consolidation at both bases, more marked on the right, but with no clear evidence of fluid. After ten days the fever subsided by lysis, but it was not until the fourteenth day that bronchial breathing was first detected at the right base. Subsequent x-rays demonstrated gradual clearing of the consolidation. We believe that the physical signs first found at the right base were those of pneumonic consolidation together with blocking of the main bronchus by a sputum plug, expectoration of which a fortnight later allowed air entry and the production of bronchial breathing. This supposition was confirmed by bronchography on the tenth day, when it was demonstrated that though the main bronchus of the right lower lobe was patent all the secondary and tertiary branches were blocked. Repetition of the bronchography prior to the patient's discharge showed the presence still of a little sputum, but for practical purposes the bronchi of the lower lobe were normal.

Another pneumonic patient exhibited the typical x-ray appearances of right basal consolidation, but though the percussion note was dull no breath sounds could be heard over

the diseased area. Next morning, however, the breathing was bronchial in character, but reverted again later in the day to its previous inaudibility. Occlusion and patency of the bronchus alternated during the next fortnight, at the end of which radiological examination showed almost complete resolution.

The occurrence of lobar pneumonia not with the signs of fluid but with complete absence of abnormal physical signs is less frequent but even more interesting.

A third case of unmistakable pneumonia showed no abnormal physical signs whatever until a few redux crepitations appeared during resolution, and the diagnosis might have remained a little uncertain had not a radiograph shown consolidation of the centre of the middle lobe with a cortex of healthy lung tissue shallow enough in itself but sufficient to obscure the condition of the underlying lung ("the central pneumonia" of the textbooks).

The physical signs of pneumonia with and without bronchial occlusion are closely parallel to those of massive or absorption collapse with patent bronchus and with closed bronchus, the main point of difference being the position of the heart. In pneumonia the apex beat is not as a rule displaced, whereas in collapse there is a homolateral shift which may not, however, in well-compensated cases, be sufficient to be clinically evident. Massive collapse may itself be further complicated by the development of pneumonia in the affected lung tissue, in which case differential diagnosis is largely dependent on x-ray examination and the temperature chart.

While it is readily admitted that a large pleural effusion would cause such contralateral cardiac displacement as would dispel any difficulty in distinguishing it from one of the pneumonias above described, the small effusion conforming to the size of a lower lobe is a very different matter, the cardiac shift being sometimes so slight as to be undetectable without a radiograph, and the physical signs identical with those of pneumonia with a blocked bronchus. We have hesitated to explore these cases for fluid for fear of infecting a healthy pleura through the needle track, but it is possible that this risk has been exaggerated. Bullowa (1937) records over two thousand diagnostic lung punctures in pneumonia without serious complication.

Should a lobar pneumonia presenting these signs (dullness to percussion and absent breath sounds) show a persistently raised temperature or secondary elevation, there arises the problem of differentiating pleural and pulmonary sepsis, empyema, and abscess, or spread of the pneumonia. The clinical findings are so equivocal that only after an x-ray film has been taken is it justifiable to explore. Our second patient, after an apyrexial period from the fourth to the eighth day, developed a temperature of 100°. Radiological examination showed no evidence of fluid, and the temperature gradually returned to normal during the ensuing week, so that it was unnecessary further to watch for the development of an empyema. It is possible that retention of sputum was responsible for the secondary fever.

We have described these abnormalities in the hope that the physical diagnosis of pneumonia may become established on a broader basis, as we believe that atypical forms are seen more often than is generally admitted, as witness the fact that these three cases were seen in succession.

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REFERENCE

J. G. M. Bullowa. *The Management of the Pneumonias*. London, 1937.

THE POSITION OF THE PATIENT IN GASTROSCOPY

AN OPERATION TABLE ATTACHMENT

BY

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During any instrumental investigation the comfort and sense of security of the patient are essential to the satisfactory performance of the examination. This is a matter of particular importance in gastroscopy, both with regard to the immediate result and to the possibility of a further examination. If these points receive care and attention at the patient's first investigation he will have little reluctance to submit himself again to the procedure should it be necessary. I have examined a number of patients who have willingly come to hospital to be gastroscoped four and five times without fear of anything more than a little discomfort.

The Patient's Position during Examination

The details of the technique of gastroscopy have been described elsewhere (*British Journal of Surgery*, January, 1937), but it may perhaps be useful to consider the question from the patient's point of view with regard to his position during the examination. Although I have on occasion found the sitting position of the patient a great advantage in viewing a difficult gastro-enterostomy opening, the left lateral position is unquestionably the most satisfactory one for almost all cases of gastroscopy. In this position the stomach is not elongated by gravity; the pylorus tends to fall towards and the greater curve away from the objective, so that each can be seen to the best advantage and properly illuminated. For the optimum ease of instrumentation, however, the patient must lie with as complete relaxation of the muscles as possible, and to obtain this he must have complete confidence that he cannot slip or alter his position during the examination, particularly when the table is tilted. Fixed, rigid, but well-padded supports are both more efficient and give more confidence to the patient than the grip of an assistant, and with this object in view I have designed an attachment to an operating table to adapt it for gastroscopy.

With regard to the desirability of tilting the patient during the examination I have experimented for over two years with a special table which allowed tipping in all directions—longitudinally or sideways, either singly or in combination. I have found that whereas tilting the patient head down has often been useful in shifting a collection of bubbles or in opening out an exaggerated gastric angle to allow the pylorus to be seen, in no case has the sideways tilting enabled a difficulty to be overcome or brought into view a part of the stomach that could not be seen.

In accordance with this experience, the attachment described below consists of a portable folding table top, which, when strapped to an operating table with provision for the Trendelenburg position, provides all the supports and movement necessary for gastroscopy. It carries an adjustable back rest, head rest, shoulder stop, and Henning's knee and foot pillars, all of which are detachable (Figs. 1 and 2), so that it is unnecessary to move the patient between the anaesthetizing of the throat and the passing of the instrument.

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