

Why men of science find it so hard to believe in partial responsibility, is often because they do not appear to observe that imputability does not depend upon actual discernment of right and wrong, so much as upon the presence or absence in the offender of the qualities necessary to acquire and maintain such power of discernment. These qualities exist more or less in the various members of a family of degenerates, the personality of each being attenuated, perhaps in different degrees. Being alike of unstable equilibrium, all are especially liable to impulsions of passion of any kind. One often sees children, long before they can know the nature of vice and crime, indulging in horrible crime from an instinctive faculty and a preference to evil that must be outside themselves (Mendel). Who can dare to say that to such unhappy beings, when adolescent, responsibility for the full measure of damage done by their evil deeds (if any) ought justly to be imputed ?

The culpability of individuals, therefore, varies indefinitely from the maximum to the minimum, and in the words of the Bible, "Unto whomsoever much is given, of him shall be much required."

Clinical Notes and Cases.

Emphysema of the Subcutaneous Areolar Tissue occurring in a Case of Acute Mania. (1) By CONOLLY NORMAN.

THE subject of this observation was a young woman who was admitted to the Richmond Asylum, Dublin, on September 16th, 1898. Hereditary history not very full nor trustworthy. Father died many years ago of phthisis. Mother, who is a person of somewhat eccentric manners, stated that X— (our patient) had always been wayward, not bright and not easy to manage. On the other hand, X—, when she recovered, said that her mother was flighty and neglected her, preferring the other children. Brothers and sisters healthy. Patient did not "get on" at home. A few weeks before admission, she was

sent out as a nursery governess. Does not seem to have been kindly treated in her situation : had a troublesome menstruation ; became sleepless, excited, and incoherent. Actual oncome of insanity is dated a fortnight before admission.

On admission.—Fine healthy-looking girl, well nourished, but not fat. Stated to be sixteen years old. She looked rather childish for that age, and the mammæ were less developed than normal. She was a little bruised about the arms, and scratched about the wrists ; otherwise there was nothing to suggest injury. No fractures were detected. The lungs seemed normal. The heart presented a slight irregularity of rate, probably merely nervous. She was in a state of acute maniacal excitement. She resisted violently, and required to be held by three nurses while her chest was being examined. She uttered piercing screams every now and then. She kept constantly reiterating the declaration, "I do not want to be a Jew." She was placed in the female infirmary. She became very noisy and violent, flinging herself about, and struggling frantically with the nurses who endeavoured to restrain her. Towards midnight she was removed to a single room, where she spent that night (September 16th to 17th) without sleep.

September 17th.—Kept in seclusion. She managed to wrench open the locked window-shutter in two single rooms successively. It is also reported that having climbed on the internal window-sill, she flung herself down, but she was probably not hurt as she fell upon a nurse. She was placed in another room, the floor of which was covered with mattresses, and she was held down in her bed on the floor by a couple of nurses until a new and secure shutter was fixed in another apartment. Reporter saw her while being so held. She endeavoured to get up, was intensely restless, indulging in ear-piercing yells and unmeaning shouts. Her language consisted largely of mere repetition of people's names and of short phrases, of which the commonest was "I will not be a Jew." She had hyoscine $\frac{1}{10}$ grain in the morning, and morphia $\frac{1}{4}$ grain in the evening, both subcutaneously. No effect was perceptible from either in producing quiet or sleep.

September 18th.—Restless night. Incessantly noisy to-day. Has scarcely taken any food since admission. Lips becoming sordid, and breath rather foul. Temperature in axilla 97.6° morning, 98° evening. Had bromidia 1 drachm morning and evening. Spent all day in a single room. Fed with nasal tube three times—morning, midday, and evening. The last administration of food at 7 p.m.

September 19th.—Patient was reported restless and noisy all night. At about 9.30 a.m. found to be suffering from extensive emphysema of the integuments of neck and chest. When seen by me a little later she was restless and noisy, shouting incessantly in her monotonous and unmeaning way. She was resistive, violently struggling against any examination. Nevertheless after protracted efforts I was able to go all over the chest. I could detect no irregularity of surface of clavicles, sternum, or ribs, nor could I discover bony crepitus on palpation. Neither bony crepitus, nor lung crepitus, nor friction-sound was audible with the stethoscope. The conditions of resonance on percussion were not easily to be determined, owing to the degree of emphysema. The distribution of the emphysema was as follows:—Sides and back of neck, leaving a triangular region from the angle of the jaw on each side to the top of the sternum free ; entire front and back of thorax, most marked on right side ; right hypochondrium almost as far down as the level of the umbilicus ; shoulders and arms down to the elbow, most marked on right side ; the skin over the not fully developed mammæ was much distended, presenting an irregularly lumpy appearance ; emphysematous crepitation was most distinct in the subclavicular regions. Temp. 98.4° at 9 a.m., 100° at 1 p.m., 99.4° at 8 p.m. Had morphia $\frac{1}{4}$ grain hypodermically at 11.30 a.m., and the same at 4.30 p.m., and the same at 9 p.m. During this day she took no food. The bowels did not act. Croton oil was dropped on the tongue. She was continuously restless and noisy, shouting short unmeaning sentences over and over.

September 20th.—Slept interruptedly about four and a half hours. Restless, noisy, and resistive. She shouts inarticulate cries in a perfectly unmeaning way, and keeps repeating people's names for hours at a time, or short sentences in

the same manner. Pulse of fair strength, 96. Skin cool and moist. Took voluntarily a pint of milk and an apple. Emphysema, neck, chest, right hypochondrium as yesterday. The difference between left and right sides is more noticeable than yesterday, and the emphysema can scarcely be felt down left arm. Had morphia hypodermically $\frac{1}{4}$ grain at 9.30 a.m., with $\frac{1}{100}$ grain digitalin, and morphia $\frac{1}{4}$ grain in same combination at 1.45 p.m. This day there was a surgical consultation with a view to ascertaining (1) whether there was a broken rib; (2) what was the origin of the emphysema. Our visiting and consulting surgeon, Dr. W. J. Martin, and an eminent hospital surgeon in the city, conferred with the resident medical staff. No injury was discovered, and no definite diagnosis was come to as to the probable origin of the emphysematous state. Temp. 97° morning, 98.4° evening.

September 21st.—No cough; no difficulty of breathing; no difficulty of swallowing. Respirations 16 to 18 per minute. Left to herself she was somewhat more tranquil, but resists and shouts when one approaches her. She refuses food, grapes, milk, &c., but takes a little if the things are left near her. Impossible to make any satisfactory examination owing to her resistance, but the emphysema seems less on the left side, and cannot be felt on the left arm. On the other hand, it has extended down the right forearm to the wrist, and it is still very marked in the lateral regions of the neck and all over right side of thorax. The crepitation is most coarse under the right clavicle. There is on each forearm a patch of erythema, with tenderness at the site of hypodermic syringe punctures. Morning temp., 99.4°; evening, 100°. Enema.

Dr. W. H. Haughton, who is an experienced radiographer, assisted Drs. Rambaut, Fleury, and the reporter in examining the chest with the Röntgen rays. In accordance with our experience as elsewhere recorded, the examination was a little unsatisfactory. One of the observers thought he detected some slight thickening of the second right rib about three inches from the sternum; another could not perceive the phenomenon referred to; the others, while noticing the darkening of the anterior image, thought it was due to the shadow of a posterior image crossing the former, and did not represent any real change in the rib. The patient was tolerably tranquil during the examination with the fluorescent screen.

September 22nd.—Pretty quiet when left alone; occasional shouting fits. Resistive and noisy when under examination. Taking plenty of milk, tea and toast, grapes, &c., when the things are left with her. Resists too active attempts to feed her. The emphysema seems to be limiting itself on right side. It can no longer be felt in the hypochondrium. On the other hand, crepitus is very coarse in the right subclavicular space, where, with careful manipulation and a little attention, it can be heard with the unaided ear—faintly indeed, but distinctly. Considerable inflammation round hypodermic punctures in both forearms. Enema. Sulphide of calcium $\frac{1}{4}$ grain every two hours. Slept a good deal during day. Morning temp. 99.8°; evening 99°.

September 23rd.—Fair night; more tranquil. Pulse 88, respirations 16. Sleeps (as yesterday) indifferently on back or on either side. It was impossible to make a thorough examination of her chest, but in the subclavicular and lateral regions resonance was normal, and vesicular breathing could generally be made out distinctly. She holds her breath while one is examining, which increases difficulty. Emphysema cannot be made out to-day in either arm. It is less everywhere; hardly perceptible on left side of chest, except just under clavicle. No cough. Morning temp. 98.6°; evening 98°.

September 24th.—Morning temp. 100°; evening 99.8°. Lungs appear normal and heart strong. Considerable inflammation of right forearm. Some inflammation of left forearm also, but not so severe. After surgical consultation right forearm incised in four places. Free discharge of pus, *bonum et laudabile*. Patient bore incisions well.

September 25th.—Emphysema generally less; most marked under right clavicle; also well marked in neck. There is a slight difference in percussion note in the subclavicular spaces. This is probably due to the different degrees of surgical emphysema. No crepitus or friction heard. I was able again to feel the second right rib very distinctly, and could make out no irregularity. Respirations fourteen to sixteen per minute, and she retains the power which one has observed previously of holding her breath for quite long periods. Her voice yesterday seemed

hoarse and whispering; loud but hoarse and cracked to-day. Morning temp. 99°; evening 100·2°.

September 26th.—Temp. 100·4° to 98·4°. Noisy in the night, but slept five hours. Takes nourishment well. Tongue moist. Bowels free. Respiration easy. Breath-sounds normal in front and behind. On the left forearm there is localised inflammation in two places—round punctures of hypodermic needle.

September 27th.—Emphysema continues to diminish in extent. It is now to be felt in the neck, chiefly at the root and near the middle line: on the left side of thorax, only far out in the infra-clavicular space; on the right side of thorax as low down in front as the upper margin of the mamma, as low down laterally as the lower margin of the mamma, not behind at all. The emphysema beneath right clavicle is distinctly coarser, and can with care be heard to crepitate on pressure. As yesterday morning, but rather more distinctly to-day, the percussion note is raised over right apex. No abnormality could be detected with stethoscope in breath- or voice-sounds. Free from cough. Respirations 17. Morning temp. 99°; evening 98·4°.

September 28th.—Respirations 18 to 20; pulse 80. Decubitus semi-dorsal, semi-dextral. Reported generally to lie on back or right side; no cough. Asked for food yesterday, and complained of being hungry; made a good breakfast (egg, &c.). Tongue (at first dry and sordid, then white and dry, then cleaner but dry) is becoming more moist. Emphysema less extensive, only noted at root of neck and in both infra-clavicular spaces; less coarse, yet still audibly crepitating in right sub-clavicular space. The right apex distinctly less resonant than left and the vesicular murmur fainter; no bronchial breathing, crepitus, or friction detected. Temp. 98·4°.

September 28th.—Some impairment of percussion note at right apex and weakening of breath-sounds. When she draws a deep breath the respiratory murmur is good and clear, and there are no adventitious sounds except the superficial crackling of the emphysema. The inflammation of the left arm seems to be receding.

September 29th.—The impairment of resonance and diminution of vesicular murmur over left apex are rather less marked to-day. The emphysema is much less. There is no tenderness to be made out anywhere over the chest, and the patient is now quite capable of saying if she were hurt, though probably incapable of concealing wincing.

September 30th.—Temp. 98·6°—99·6°. Heart normal. Still some impairment of percussion note at right apex. Breath-sounds are rather weak, but she can draw a deep inspiration when required. Sounds are then normal, and quite free from anything adventitious. Emphysema very slight. Tongue furred. Appetite good. A small boil on left buttock, a little papule near anus, and another on abdomen, probably part of a general eruptive tendency.

October 1st.—Urine acid, 1016; no sugar, no albumen. Restless night, crying and frightened. Temp. 99·8°. There is some weakening of the respiratory murmur over right anterior apex, but I think the difference in percussion note has disappeared. On deep inspiration breath-sounds good and clear. Emphysema has nearly disappeared. Heart acts well, except for a little variation in rate. Small abscess on left arm opened. Acneiform eruption on chest.

October 2nd.—Temp. 99·8°. Copious eruption of sudamina over front of chest. I cannot be sure of emphysema under right clavicle (elsewhere it is absent). Difference of resonance less noticeable. Vesicular murmur over right side less distinct than over left. Second small abscess on left forearm opened to-day. There is a deep hard swelling over middle of right radius (? periosteal). (This subsided without giving further trouble.)

October 3rd.—Temp. 100°—98·8°. Cannot make out any difference in note between apices, but there is still weakened breathing on the right apex. No adventitious sounds anywhere. Fairly tranquil, and taking nourishment well. Emphysema can no longer be detected. The ribs can be pretty distinctly made out everywhere, and no irregularity, thickening, or crepitus can be found. The feebleness of the respiratory murmur is confined to right apex, elsewhere the breath-sounds are in every way normal. No difference of resonance noticeable to-day.

October 13th.—For the last ten days gradual mental improvement. Tem-

perature varying from normal to a point or two over 99° ; now normal. Patient is talkative and incoherent, but not restless.

October 18th.—Temperature has been subnormal for two days. On physical examination of chest the amount of expansion on inspiration of both apices seems equal and normal. Tactile and vocal fremitus well marked, and about equal on both sides (perhaps slightly less on the right). Percussion note just appreciably higher on gentle percussion over right apex. Breath-sounds normal; no adventitious sounds. Vesicular murmur may be slightly less marked over the right apex. Vocal resonance normal, and the same on each side.

October 23rd.—I cannot detect any difference in percussion note over the apices. The respiratory murmur is not quite so loud over right, but the difference is trifling, and but for the history I would incline to say the abnormality was over the left. No adventitious sounds anywhere. Her mental state prevented a full examination, as she would not speak, nor cough, &c. I was able, though she resisted, to examine very fully each rib by palpation. I could detect no trace of irregularity or thickening anywhere.

October 27th.—I think the percussion note over the right apex is slightly higher pitched than on the other side, and over the same area vocal resonance increased, but respiratory murmur diminished.

November 3rd.—This patient has been up and sitting in the ward during the last week. The physical signs in the chest are unchanged. Mentally she seems to be less confused, and is tranquil.

November 16th.—Patient is less confused, but she does not yet recognise or is interested in her surroundings. She is up every day.

December 22nd.—Patient's mental condition is very much improved, but she does not yet seem to recognise her position. She knows who I am, and can tell the name of her attendants. She spends most of her time reading, or at needlework, or in similar occupation.

January 16th, 1899.—Physically healthy, but there is still slight dulness and diminished breath-sounds over the apex of the right lung, but no adventitious sounds. No thickening of a rib as after an old fracture is noticeable. The improvement in her mental condition is very well marked. She recognises her surroundings, and now knows the names of the other patients, &c. She still has a childish and somewhat incoherent manner, and when questioned laughs in a silly way.

It is unnecessary to dwell on the further progress of the case. The patient was examined with the fluorescent screen again, and the thorax was photographed with the Röntgen rays, but no trace of damage to bone could be discovered. She became very fat, and developed remarkably as to physical outlines. She resumed what apparently was her normal condition—one of tranquillity without very high intelligence—[and was discharged "recovered" May 10th, 1899]. She remembered in the beginning of her illness imagining that she was about to be married to a Jew, which was a repellent notion. She remained throughout remarkably free from any of those indications of gross sexual excitement so common in girls suffering from acute mania. Menstruation while she was in the asylum was irregular and scanty. Its occurrence or non-occurrence did not seem to influence her mental state.

The notes from which the above account has been abbreviated were written in part by the present reporter, in part by his colleagues, Dr. Eleonora L. Fleury and Dr. Gordon W. Holmes, to whom he must express his warm thanks for their very careful watching of this interesting case.

A case of much interest in itself and in its relation to the case just recounted is recorded by Kellner, of Hubertusburg, in vol. xxv of the *Archiv f. Psychiatrie*. The author states that he has found no similar case in the psychiatric literature of the preceding twenty years. Kellner's patient was a woman of thirty-four years of age, who had been a prostitute, who suffered from general paralysis, and who, on

her admission to the asylum in February, 1892, exhibited diminished percussion resonance over both apices, the note being higher on right than left side; fine dry crepitus over both apices, especially the right, and prolonged and somewhat blowing expiratory sound over right apex. No pleural rub. No cough nor expectoration. She was maniacally excited, mistook persons, and showed marked sexual excitement. She was liable to outbursts of noisiness, during which she shouted repeatedly short words or sentences ("criminal," "policeman," and the like), at the same time striking herself violently on the head and chest. In December, 1892, excitement increasing, patient became very violent to those about her, and stood for hours by the wall beating her head with her hands or stamping constantly, and continually shouting, "I swear upon my honour." Some rest and sleep were procured by wet-packing and strong doses of duboisin subcutaneously. She continued to cry, "I swear upon my honour," and kept time to her cries with blows upon her chest. Then she took to wringing and rubbing her hands till she produced blisters and raws. She tore all dressing off these. At length (December 24th) the strait-jacket was applied, 0.001 of duboisin being given subcutaneously. After a short period of slight dulness she went on shrieking till morning. At 5 a.m. on December 25th, when she was undressed (probably this means when the jacket was removed, the length of time that it was worn not being specified) and washed, nothing was noticed unusual. Between 7 and 8 o'clock a.m. a slight swelling was first observed in the upper part of the back and the lower part of the neck on the right side. The patient kept on screaming, "I swear upon my honour." The swelling rapidly extended over the neck, face, and entire upper part of body. By 10 o'clock the emphysematous swelling had spread over the trunk and abdomen. Posteriorly it extended to the upper margins of the glutei, the back resembling two inflated air-cushions. The head was thrown back, the shoulders raised. The neck looked like a gigantic goitre, particularly under the chin, and measured 52 cm. in circumference. The region over the clavicles was so swollen that one could not feel these bones without pressing down to a depth of 2 cm. The swollen eyelids completely closed the eyes. The abdomen was deeply marked by the linea alba. The shoulders and arms were engaged in the swelling. The breasts, formerly flaccid, were much swollen. The circumference of the chest beneath the nipples was 92 cm. The skin was neither specially pale nor red. Clear bluish veins were abundant on arms and chest. To the touch marked crepitation was present everywhere. Small clusters of swellings up to the size of a pea appeared under the skin, which vanished on pressure, and reappeared again when pressure was removed. On the front of chest, and there only, the impress of the finger remained for some time (œdema). The bridge of the nose, the integuments immediately surrounding the mouth, the forehead, the scalp, and the ears were free from swelling, and remained so. The swelling was everywhere more marked on the right side than on the left. The voice was low and hoarse. No difficulty of swallowing. Urine retained, necessitating catheterisation. Towards evening the emphysema had spread to forearms, fingers, and thighs as far as knees. Wet packs. Morphia subcutaneously.

On December 26th, *retentio urinæ* from swelling of urethral mucous membrane, which crepitated on pressure. The voice was hoarse. There was frequently difficulty in swallowing liquids.

December 27th.—Calmer after injection of duboisin. After three hours in a wet pack the temperature, which had hitherto been normal or subnormal, rose to 102.2° F., but went down quickly to normal when the pack was removed.

On December 28th the swelling of face had decreased, and patient could open her eyes. On the other hand, it was more distinct in the peripheral parts of the extremities, where crepitation could be felt clearly. The soles and palms and the dorsa of feet and hands, as well as the gluteal region and the parts already named, were never attacked.

On December 31st it was noted that the generally decreasing emphysema had pretty quickly increased again after some hours of excitement, and the author observed that such a temporary augmentation had occurred several times.

In the early days of January the swelling steadily and rapidly declined. On January 1st a close examination by palpation of the thorax was possible. No trace of irregularity or other indication of fracture of ribs or collar-bones could be found, and there were no tender spots.

On the 9th there was a paralytic seizure, with subsequent elevation of tempera-

ture (42° C.). Emphysema was only present in the peripheral parts of the extremities and in a few spots on the anterior surface of the chest.

On January 12th emphysema had entirely disappeared. The general physical condition had returned to the *status quo ante*. The circumference of the chest was 72 cm., of the neck 32 cm. The exploration of the lungs showed no particular change from the antecedent condition.

Dr. Kellner's case is illustrated by a couple of photographs showing the emphysematous condition and the subsequent state. Dr. Kellner was so kind as to say further, in reply to my inquiries, that the patient has since the date of his paper been sent to the chronic asylum of her district, where he finds she is still alive, so that there has been no opportunity for ascertaining anything further as to the condition of her chest than the clinical history tells.

Dr. Kellner epitomises his case by saying that it is the case of a paralytic patient who suffered from a rather old phthisical lung trouble, and who, after repeated and excessive shouting, was suddenly attacked with extreme superficial emphysema.

The emphysema was much more general in his case than in mine. Otherwise there is a very remarkable resemblance between the two. Both patients were very violent, and knocked themselves about in a very reckless way. Both were subjected to a certain amount of restraint—his to direct mechanical restraint (jacket), mine to the restraint of nurses holding her. If there was greater risk of injury through the violence of others in my case (though I have no reason to believe that such occurred), there was in his case more probability of injury in the mode which he suggests, namely, by violent straining on the patient's part. Both patients shouted beyond the ordinary degree of noisy maniacs, and both tended to shout in the same particular way—by the monotonous and incessant repetition of the same short sentences. Both, I believe, had old apical lung mischief. This was clearly ascertained in Dr. Kellner's case. In our case I think it is probable that the slight difference between the physical signs over the apices existed from the beginning, though we overlooked it at first, as is so very easy to do in such cases. The involvement of the right apex was but slight, as will be evident from the notes. I have been careful to let this be seen by quoting the notes of various observers, showing such slight differences in descriptions given by different observers, or of the same observer at different times, as occur in cases where the signs are not very well marked. It is probable

that there was some degree of impairment of perfect action of the lung through old catarrh, accompanied by pleural adhesions.

In the Hubertusburg case the chances of fracture of the ribs (the commonest cause of surgical emphysema) appear to have been dismissed early and entirely. On the other hand, I thought of fracture first and constantly, and only dismissed the notion from sheer lack of evidence. It is hardly possible to suppose that so extensive an injury as would have resulted from a fractured rib wounding the lung could have occurred not only without distinct physical signs (often enough obscure), but without any symptoms whatever. The rise of temperature which occurred soon after the appearance of the emphysema was clearly due to the suppurations which unfortunately followed hypodermic injections.

Both patients, by the way, had been subjected to subcutaneous injection, but I do not attribute any importance to this fact; for though I have known the careless use of the syringe followed by not quite inconsiderable local emphysema, that general emphysema should follow it is of course impossible.

My case differed from that of Dr. Kellner in one particular: artificial feeding had not been used with his patient. In our case the patient had been fed three times with the nasal tube the day before that on which the condition of emphysema became evident. The possibility of some injury about the throat can perhaps not be wholly excluded. The tube used, however, was a soft rubber one. Injuries about the throat produce emphysema sometimes in a way which is not very intelligible. Some time ago a patient of mine, in a fit of melancholic frenzy, thrust down his throat the leg of a chair which he had broken off. Presumably he did not injure his larynx or trachea, for he had neither loss of voice nor any other troublesome symptom afterwards except emphysema of the neck and trunk. He made a good recovery bodily and mentally. Of course the chances of injury with a soft nasal tube must be small, and emphysema is not one of the recognised risks of artificial feeding.

Kellner observes that there was in his patient probably a predisposition, as it were. The woman had been fat, and had then become thin, and so there was not the normal resistance in the subcutaneous tissue. This condition did not exist in

my case, but the extension of the emphysema was by no means so great. That there is something either in the condition of the lung tissue, or in the condition both of the lung tissue and the superficial tissues, which produces a "liability" to subcutaneous emphysema, seems probable from Belli and Rebaudi's case referred to by Kellner, in which a typhoid fever patient developed general emphysema without injury or strain.

Emphysema resulting from straining is well enough known, occurring in parturient women, in children after prolonged screaming, &c.

Can the "cause" of the emphysema in these asylum cases have been the mere excessive strain resulting from continuous shouting? In both patients an element in accentuating strain may have been found in the fact that the women kept repeating the same short sentences over and over for hours. In one the use of the jacket, the other the fact of being held by nurses, may have given the resistance required to fully develop the condition of strain. In both probably there was a diminished elasticity of a portion of the lung, which may have further contributed to the occurrence of rupture under strain.

All these conditions, even in combinations such as occurred in Dr. Kellner's case and mine, are common enough to render it strange that more such cases have not been recorded if our interpretation of the phenomena be correct.

Dr. Samuel West, writing of pneumothorax, says: "The question is raised whether it is possible to rupture the healthy lung by any force which respiration can bring to bear upon it. To this question an affirmative answer must be given. The violent paroxysms of whooping-cough and the straining of parturition afford clinical evidence that the lung may be ruptured by expiratory efforts. The condition, however, which is commonly produced is not that of pneumothorax, but that of subcutaneous emphysema. A careful experimental study of this subject has been made by Dr. Champneys upon the lungs of infants. When the lung is over-distended and gives way, the air first makes its way beneath the pulmonary pleura, stripping it easily off for some distance from the surface of the lung. It then passes along the root of the lung to the mediastinum, and following thence the course of the cervical fascia, it reaches the subcutaneous tissue of the neck, whence it may spread over the whole body.

If the pleura gives way, the place of rupture is to be found usually near the root of the lung ; but although pneumothorax did now and then arise in this way, the usual result was that already described—namely, emphysema of the mediastinal tissue and of the neck. Sometimes by artificial respiration after tracheotomy the air has taken the reverse direction, and, tracking downwards from the tracheotomy incision along the deep cervical tissue, has reached the mediastinum or even the subpleural tissue, and occasionally the pleura has been ruptured and pneumothorax produced.”^(*)

(¹) Read at meeting of Irish Division, April 1st, 1899. (²) Bradshawe Lecture on ‘Pneumothorax,’ *Lancet*, August 20th, 1887. I am obliged to my friend and colleague, Dr. Holmes, for this reference.

A Case of Rapid Ante-mortem and Post-mortem Decomposition. By E. B. WHITCOMBE, M.R.C.S., Birmingham.

THE patient, thirty-nine years of age, was admitted into Birmingham Asylum in February, 1898. He was a porter, married, in fairly robust condition, and was a typical example, both mentally and physically, of general paralysis of the insane of somewhat short duration. He was stated to have been steady, of temperate habits, and had been in the army. For twelve years he served in India. No history of fevers or other illness. The disease progressed without any special features until January 14th of this year, when he was noticed to be worse ; his breathing was a little rapid, and in consequence he was sent to the infirmary ward and was examined thoroughly by the assistant medical officer, who found nothing specially interesting, but ordered him to be put to bed and kept warm. This was about 3 o'clock in the afternoon. At 7 o'clock the same evening I was asked to see the patient (he had been examined at 5 o'clock by the nurse). I found the left leg from thigh to toe was double the size of the other leg, and nearly the whole surface of the leg was perfectly black, and there were numerous large bullæ the size of one's fist in different places along the leg. There was no special line of demarcation. At first sight it looked like an extreme case of local purpura, but after a careful examination I came to the conclusion that putrefaction had actually set in, and that the man was dying,