

At the beginning of his attack, and for a long time afterward, the patient seemed unconscious of any infirmity of speech. He thought he spoke correctly, and, unlike aphasic patients generally, was not disturbed by the fact that he was using the wrong word. He was even angry with his relatives because they did not understand him, and do as he bade them. It was undoubtedly here that his insanity played a prominent part, and prevented him from appreciating his own mental and physical condition. He seemed to have positive ideas; and to his own consciousness they were sufficiently reasonable. He milked the cows several times a day, chained them to their stalls, and nailed the windows, with the air of a man who understood perfectly well what he was doing, and recognized the importance and necessity of so doing. In the same determined manner he spoke and ordered his family to do this and that, never in any way indicating that he did not understand what he was about. It was only after a long residence among strangers that he seemed to discover that he was not understood.

(2.) He gradually recovered the power of speech, and was able to express his own ideas quite easily. The strange words that he at first used gradually disappeared from his vocabulary and he once more used the right word in the right place. But notwithstanding this he was wholly unable to understand language addressed to him. Many times have I endeavored to converse with him, but he never seemed able to understand and would invariably reply on some wholly irrelevant subject. For the last few months of his sickness he seemed conscious of this inability to comprehend remarks addressed him, and his expression was that of a foreigner who does not understand your language. At the same time his hearing was perfect; he understood gestures very readily, and played a good game of dominoes or checkers. Not only this, he could read understandingly. In short, he could comprehend ideas communicated by gestures or by writing and printing; but spoken language was wholly incomprehensible to him. On one occasion he received a local newspaper from his native place. There was an account therein of a runaway, in which an old friend of his was thrown out of his carriage and injured. He seemed to understand the account and read it aloud correctly to the physician, making some comments on it.

(3.) The lesion was peculiar. Ordinarily the third anterior convolution on the left side is destroyed or encroached upon in aphasia; if not in the left it is generally in the right hemisphere. In the present case this convolution was sound on both sides. This probably affords an explanation of the patient's recovery of speech to a certain extent. If the anterior convolutions on both sides had been diseased his aphasia would have been permanent in all probability. The probable sequence of pathological events in the case seems to me to be somewhat as follows. An embolus from the heart was swept into the left middle cerebral artery. This caused the numbness of the right side and the loss of vision, but the speech centre was not affected at this time. At the second attack undoubtedly another embolus was swept into the middle cerebral artery on one or the other side, it seems to me impossible to say which, causing the mental confusion and prostration. In the third attack still another embolus was carried into the circulation and probably this time the right side was affected as well as the left. The centre of co-ordination of language was not actually affected struc-

urally; but the disturbance of the circulation in that centre was so great that its function was entirely destroyed at the time. At the same time the general disturbance to the cortical portion of the brain, involving of course the centres of ideation, was so great that mental confusion resulted. Gradually, through the restoration of the circulation by collateral channels in the anterior convolutions, the power of coördinating language slowly but imperfectly returned, although a healthy state was never again reached.

The question arises, How can the fact be accounted for that he could understand ideas communicated in writing or printing or when expressed in gestures, while the very same ideas, expressed in spoken words, no matter how slowly they were uttered, were totally incomprehensible to him? The most probable explanation would seem to be that the nerve fibres conducting ideas from the auditory apparatus to the higher cerebral centres were actually interfered with and destroyed by disease. Whereas the nerve fibres conducting ideas from the visual organs were unimpaired. His hearing was perfect; the slightest sounds were heard by him. A spoken word, however, seemed merely to fall upon his tympanum and go no further.

The mental alienation made the case more blind, for the patient did not generally seem to think that he was laboring under any cerebral trouble. He considered himself well and strong and in full possession of his faculties; he always attributed the fault to others, not to himself. Hence it was impossible to carry on any intelligent conversation with him about himself.

TWO CASES OF SUBSCAPULAR ABSCESS; ONE OF THEM ATTENDED BY PERFORATION OF THE LUNG.¹

BY F. H. HOOPER, M. D.

THE first case of subscapular abscess which I shall report is one which presents some points of unusual clinical interest, and came under my observation last summer while conducting the service of Dr. Rotch at the Boston Dispensary. For the second I am indebted to the courtesy of Dr. E. H. Bradford and Dr. F. C. Shattuck, and to the records of the Massachusetts General Hospital. A careful search in medical literature has failed to find a single case identical, in all particulars, with the first, and only one which bears any resemblance to the second.

CASE I. C. D., a little girl two years and eight months old, was brought to the Dispensary on Tuesday, the 17th of August last, with the following history: Born in this country of healthy Irish parents, she has always enjoyed good health, never having had even the ordinary complaints of infancy. One week ago she began to show less life and ardor in her play, but there was no one symptom in particular calculated to excite the anxiety of the mother, unless it was that she noticed the child seemed to favor — to "uurse," as she expressed it — her left arm, and to carry it away from her side. On Saturday, that is, three days before her visit to the Dispensary, a small swelling, about the size of a pigeon's egg, was seen in the left axillary region at the border of the scapula. This increased rapidly in volume, the child becoming very peevish and restless, but there were no complaints of

¹ Read before the Suffolk District Medical Society.

pain. In the night between Monday and Tuesday the swelling burst (according to the mother) "inside." The child immediately began to cough and retch, and brought up two cupfuls of purulent matter of such fetid quality as to produce vomiting in the mother, who, I may add parenthetically, was six months pregnant. It was noticed that simultaneously with the evacuation of pus from the mouth the swelling diminished in size. Has coughed much since, and from time to time expectorated a little pus. When seen the following morning at the Dispensary, the child was very pale and feeble, with a short cough, but no expectoration. On examining the back the left scapula was found projecting from the side, being pushed outwards and backwards by a soft fluctuating tumor extending beyond the axillary edge of the bone and below the inferior angle. The skin covering the tumor was healthy. The swelling was unaffected by the respirations, which were quick and short. No fetor of the breath. A small abscess of the scalp was found on the top of the head. On ausculting the upper left back loud gurgling and metallic râles were audible over the spine of the scapula at a point situated about the middle of the spinous process, and covering an area as large as a silver dollar. Owing to the feeble condition of the little patient a more thorough examination was not attempted at that time. In the afternoon, however, I visited her at her home, and found, in addition to the auscultatory signs already enumerated, numerous fine, moist râles occupying the lower lobe of the left lung. Percussion normal at the base, but as it caused so much disturbance to the child the whole chest was not percussed. Right lung healthy. The expectoration had been saved, as directed: small in quantity, thick, of a yellowish color, and odorless. A microscopic examination showed it to be pus unmixed with blood or any lung tissue. Child very feverish.

The next day, August 18th. Has slept well. Has short cough, but no expectoration. Abscess appears to be smaller. The *gargouillement* over spine of scapula has disappeared. Bronchial respiration and bronchophony in the same spot strongly marked. The stethoscopic signs in other respects unchanged. Temperature 104° F.; pulse over 150.

August 19th. Seen at 8.30 A. M. Slept well yesterday, but was kept awake in the night by the distressing short cough. Sputa scanty, but purulent. Temperature 104° F.; pulse about 160.

Four P. M. Vomits the milk and brandy, and refuses nourishment. Sherry wine substituted for the brandy.

August 20th. When seen in the morning the child was very uneasy and restless, having been kept awake since one o'clock by the cough and difficulty of breathing. The tumor has increased in size. The râles in lower left chest less numerous and coarser. Temperature 103° F.; pulse very rapid.

Returned at noon and attempted to aspirate. Although the abscess was punctured at two different points, and the largest trocar which accompanies the Potain aspirator was used, the result was negative. The point of the canula could be felt moving freely underneath the skin. The aspirator was proved to be in perfect working order.

August 21st. Slept well yesterday after the puncture. Not much cough. Skin over abscess normal, and not hot, but the scapula stands out more prominently even than yesterday, and appears to be float-

ing, as it were, on a bag of pus. As soon as possible I returned, accompanied by Dr. Elliot, who kindly lent me his aid, and a free incision was made immediately below and to the inside of the inferior angle of the scapula. The incision was followed by a sudden explosion of air from the wound, and the discharge of about an ounce of thick pus. There was not complete collapse of the tumor after the operation, but by slight pressure the scapula could be forced down to its normal position. Air escaped with much noise from the opening with each cough or cry of the infant. A drainage tube was inserted, and a tight bandage applied to the chest.

August 22d. Much dyspnoea and cough, with purulent expectoration, but the pus is less thick. Has taken milk freely, and slept well. On the whole, condition no worse. As there were no signs of any discharge on the bandage it was not removed. Temperature 103.6° F.; pulse over 150.

August 23d. No particular change. Temperature 103° F.; pulse over 150.

August 24th. Cough, paroxysmal and severe, but not so frequent. When the child coughs, a loud, hissing noise, produced by the air passing out of the wound, can be distinctly heard through the bandage. The abscess has discharged a good deal. Bandage removed. There is still some bulging of the scapula, and considerable oozing of thin, sweet pus from the opening. Upper part of left chest, front and back, tympanitic on percussion. Respiration over spine of scapula in the region where the coarse, bubbling râles were heard strongly amphoric. At the base percussion normal, and the fine râles have been replaced by a few coarse, dry râles and roughened respiration. Child very weak and emaciated. Bandage reapplied. Temperature 102° F.; pulse 144. Saw the case again in the afternoon in company with Dr. F. C. Shattuck. Condition unchanged.

August 25th. Drs. Cabot and Bradford visited the child with me in the morning, and verified the auscultatory phenomena above mentioned. Coughs less. No expectoration. Much discharge of thin, but not fetid, pus from the abscess, which was dressed, and bandage reapplied. In the afternoon there was a marked change for the worse. Cough very distressing and frequent, and much shortness of breath. Temperature 104° F.; pulse over 160.

August 26th. Seems a little more comfortable. No expectoration excepting mucus. The scapula now lies flat against the chest wall, and the stretched and loosened skin upon and around it has the appearance of a large empty sac, the flaccid walls of which move in and out with each inspiration and expiration. The flow of pus the same as on the previous days. Temperature 99° F.; pulse 128.

Dr. Shattuck again examined the case in the afternoon, and furnished me with much useful counsel in regard to it.

August 27th. In the morning temperature 98.5° F.; pulse 120. Notwithstanding this marked decline of the temperature and of the rapidity of the pulse, the extreme pallor of the child, the increasing feebleness and loss of flesh, threatened an unfavorable termination. In the evening temperature 103° F.; pulse 152.

August 28th. At both visits I found the little girl very restless and irritable, very weak from loss of sleep. Morning temperature 102.5° F.; pulse 146. Evening temperature 104° F.; pulse about 160.

August 29th. Condition about the same. In the morning temperature 103.5° F.; pulse over 150. In the evening a little worse. Temperature 104° F.; impossible to count the pulse on account of its rapidity and the fretfulness of the child.

August 30th. Increased dyspnoea, but coughs less frequently. Respiration at the base of lung slightly roughened, but no râles. The loud amphoric sound at the top remains the same. Discharge diminishing in quantity and much thinner. From the first, as already stated, the pus has not been fetid. Temperature 104° F.; pulse exceedingly rapid and small.

August 31st. Coughs very little. Respiration rapid, short and labored. Appearance pale and waxy. Sleeps a little from time to time, propped up in bed, for she will not lie down, as she has been able to do heretofore. Temperature 103° F.; pulse about 160.

September 1st. Child died.

Every effort was exerted to obtain a post mortem examination, but all my arguments were met by that superstitious ignorance which so besets the path of the dispensary physician, and an autopsy was obstinately refused. In the absence, therefore, of a scientific examination, the explanation of the clinical facts must be left to theory and conjecture. Impossible as it is to determine with absolute certainty the exact nature and point of departure of the disease, we can, I think, by elimination come pretty near a rational solution of the problem. There are a few important features in the case which I wish to emphasize, and these are, that there was no evidence of any previous disease or injury of any kind; prominent constitutional symptoms were absent; there was merely general malaise for a week before the sudden evacuation of pus from the mouth; then, it was on the outside of the chest that the swelling first showed itself, and for some days continued to expand, before any noteworthy symptom appeared. The physical exploration made it evident that there was a cavity at the top of the left lung, connecting by a fistulous tract with another cavity situated beneath the scapula, from which pus was discharged as well as from the mouth. The inquiry naturally is, In what organ or tissue are we to locate the source of the pus, and by what mechanism was this condition of things brought about? The history of the case makes it very improbable that the primary trouble was either in the lung or pleura. An inflammatory abscess of the lung, arising independently of tuberculous disease, pneumonia, or of any other ascertainable cause, may, as we know from the examples recorded by Graves, Stokes, Trousseau, and others, occur. But, pus once collected in the lung, it is extremely unlikely that it would work its way out through the resisting chest wall, instead of emptying itself into the pleural chamber or through the bronchial tubes, where the resistance would be reduced to a minimum. We had no signs of fluid or air in the pleural cavity. Moreover, the quantity of pus discharged was larger than we could expect from a pulmonary abscess. It must also be remembered that it was external to the thoracic wall that the swelling first made its appearance, and, growing larger and larger, its final collapse, or partial collapse, was coincident with the evacuation of the purulent matter from the mouth.

Could it have been a case of circumscribed empyema, in which the pus penetrated the costal pleura and worked its way down beneath the scapula? I think

not. The position and shape of the swelling and the absence of œdema are against "empyema necessitatis," which is commonly seen in the anterior portion of the thorax. Besides, there is no reason, the pus once having broken through the intercostal muscles, why there should be rupture of the pleura pulmonalis, as the pressure at that point would be slight. It might occur, however, from necrosis of the membrane, but the absence of all fetor in this case excludes any such cause. In spite of the rapidity with which disease travels in infancy, I cannot believe that an empyema could form in so short a time, and without giving rise to any more constitutional disturbance than was observed in this little patient. The character of the pus also was not that of empyema. For these reasons, in addition to some of those mentioned for doubting the origin of the affection in the lung, I shall exclude the pleura also from having been the seat of the primary trouble.

We come now to the cellular tissue between the costal pleura and the chest wall, and consider the identity or non-identity of this case with a rare form of disease described by Wunderlich¹ in 1861, and named by him peripleuritis. According to Wunderlich, peripleuritis is an inflammation of the subserous connective tissue of the pleura costalis, originating independently of traumatism, or of previous inflammation of the pleura. Wunderlich reported two cases, which were followed in the same year by two more from Billroth.² Still later, in 1874, Bartel³ presented three cases in the *Deutsches Archiv*; then Riegel⁴ added another in 1876. I shall not review in detail these cases, but merely recall to your memories the chief features of peripleuritic abscesses, in order to determine if this case can be placed in the same category. Of the eight cases reported seven were adults, and one was a child ten years old. The disease was ushered in by severe constitutional symptoms, and in the majority of the cases the health of the patient had been impaired by previous disease. But when we come to the physical signs, our difficulties are increased, for the chief points given for arriving at the diagnosis of peripleuritic abscess could not have been applied in my case on account of the anatomical situation of the tumor. Riegel, in a careful summing-up of the subject, gives the following signs as characteristic of the disease: a circumscribed, fluctuating swelling of an intercostal space, the space above narrowed in consequence of the rib being pushed up; percussion flat over the tumor, which is not altered by changing the position of the patient; good respiration beneath the area of dullness; no displacement, or very little, of neighboring organs; the swelling becoming flaccid on inspiration, followed by increased tension on expiration; finally, the character of the pus.

I cannot say that this condition of things did not exist in my little patient at the commencement of her disease, but certainly, when first examined at the Dispensary, the picture was quite different.

Wunderlich lays great weight upon the fact that in peripleuritic abscess the pus is localized, and has no tendency to burrow into the pleural cavity. In only one of the cases reported did such an accident occur. In the others it was prevented from so doing by the adhesion and thickening of the serous membrane; in the

¹ *Archiv der Heilkunde*, ii. Jahrgang, 1 Heft.

² *Archiv für klinische Chirurgie*, ii. Band, 1 and 2 Heft.

³ *Deutsches Archiv*, Band xiii.

⁴ *Deutsches Archiv*, Band xix.

one, however, although there was no adhesion of the pleural layers, the pus did not offer to work its way into the pleural sac. In the case under consideration the pus was not only *not* localized, but burst through the pleural membrane, and the pulmonary tissue also. Although the phenomena observed in my case are at variance with many of those which are symptomatic of a peripleuritic abscess, I do not think that the possibility of the trouble having had its origin in the subpleural cellular tissue can be positively excluded. A very short experience has been sufficient to prove to me how seldom nature pays any attention to the descriptions which the books give of her diseases, and although a peripleuritic abscess never yet has shown a tendency to rupture into the lung, I can easily imagine that if the disease occurs in early life, when all the influences which govern morbid processes are so altered, an abscess forming in this situation would be as likely to work its way in one direction as in another. But notwithstanding this possibility, the clinical picture of this case differs so entirely from that of the cases described by the German writers that I hesitate about placing it in the same frame. I hesitate also because I think we can find an explanation nearer at hand, which, although I anticipate some contradiction, appears to me much more plausible.

Stokes,¹ in a very interesting chapter on Perforating Abscess of the Lung, details a singular case of an "abscess of the abdominal parietes resting on the convex surface of the liver, opening externally and also perforating the diaphragm and forming a fistulous communication with the bronchial tubes." The same principles for forming a diagnosis would be applicable, I suppose, in whatever portion of the thorax the abscess happened to be. The grounds he lays down are "the occurrence of new and extraordinary symptoms, coincident with the subsidence of the hepatic distention." In our case we had a "new and extraordinary symptom" in the shape of a sudden and copious expulsion of pus from the mouth, "coincident with the subsidence of the" subscapular distention.

Now I know no reason why inflammation should not take place and pus collect beneath the shoulder blade as well as in other parts of the body. And I hold it is not improbable that the beginning of the complications in this case may have been an inflammation of some tissue, muscular or cellular, either in the substance of an intercostal muscle or external to it, which, leading to suppuration, and spreading to the pleural membrane glued the two surfaces together; so that when the pus was discharged from the abscess it was prevented from emptying itself into the pleural cavity by this pathological bridge, over which it passed to the lung, to be evacuated by the bronchial tubes. The severe unilateral bronchitis is of course easily explained, and death finally resulted owing to the exhaustion of the vital forces.

I offer the next case as evidence, as far as it goes, in favor of this view. Owing to a strange coincidence, which, in fact, is so constant that it may almost be considered some occult law, namely, that when an unusual case presents itself it is sure to be followed by a similar one, so, a few days after the death of this little girl, another infant was brought to the Dispensary, who presented, externally, appearances almost identical.

CASE II. September 10th. Bennett Burke, seven-

¹ Diseases of Chest.

teen months old. Always a healthy baby till last July, when he began to be troubled with boils on his head, which his mother attributed, of course, to his teeth. About the 1st of September she noticed a swelling under the child's scapula, which, as it continued to increase in size, determined her to seek advice. Dr. Bradford kindly called me into his room to see the child, and I found under the left scapula a fluctuating tumor, extending about an inch below the inferior angle and beyond the spinal edge for the same distance, and reaching as high up as the spinous process. The scapula was forced outwards and inwards towards the axilla, and projected from the chest wall in the same wing-like manner as was noticed in the preceding case. The skin covering the swelling healthy. Instead of returning the next day, as directed, the child was carried to the Massachusetts General Hospital, where he was promptly operated upon by Dr. Beach. A pint of pus was removed, and in a week he was permitted to leave the hospital. This little fellow has remained in good health up to four days ago, and at present moment he has a slight bronchitis.

The resemblance of these two cases, before the occurrence of the vomit of pus in the first case, is very marked. Both of the infants had had collections of pus in other parts of the body, and neither of them had any symptoms other than those which usually attend the formation of a furuncle. The debilitating, oppressively hot weather last summer was certainly conducive to and prepared good ground for furunculi to flourish, as was sufficiently shown by the large number of children who applied at the Dispensary to be relieved of these unpleasant visitors. I am inclined to place these two cases in the same class, but of course further observations are necessary before any definite conclusions can be arrived at. In looking up the subject but one case was brought to light, reported by Dr. Kwasnickiego,¹ of Warsaw, and of which the following is a *résumé*: A woman, thirty-six years of age, strong and vigorous, who had never had any serious disease, came to the hospital complaining of great pain in the left side, loss of appetite, sleeplessness, and general malaise. She stated that a week previously she had carried a heavy bundle all day, and in the night first felt the pain, which has steadily increased. Physical examination showed some swelling of the left shoulder and complete immobility of the arm on account of the pain. The scapula, displaced from its normal position, was pushed outwards and backwards, thereby dragging the shoulder and arm downwards. The anterior border of the scapula very prominent. Skin over this region stretched; otherwise normal. No fluctuation; but on pressing the scapula downwards, the sensation is like that of pressing on a spring mattress. A free and deep incision was made; half a glassful of pus evacuated, which was followed by immediate relief to the patient, and in two weeks her recovery was complete.

The dearth of information on the subject of subscapular abscess can perhaps be accounted for by supposing that the physicians into whose hands such cases have fallen have not deemed them of sufficient importance to be recorded. But, assuming that these cases belong to the same category, the first case shows us how the pus, from its proximity to a vital organ, may burrow

¹ Gazeta Lekarska, Warszawy, S. 28, Stycznia, 1867. Ropien Podlopatkowy (Abscessus Subscapularis), Dr. Kwasnickiego.

into it and destroy life, while the last two are of value as demonstrating the efficacy of proper treatment. And I feel, that had the subject of the first case received timely surgical interference her recovery also would have been a rapid and a happy one.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

BY E. G. CUTLER, M. D.

THE HISTOLOGICAL CHANGES IN CHRONIC PASSIVE CONGESTION OF THE SPLEEN.

NIKOLAIDES¹ contributes an interesting paper on this subject. Such spleens feel dense and hard, and on their cut surface the pulp, at least in spleens the subject of old passive congestion, appears to be traversed by a very abundant thickened white network. When examined carefully, a thick white layer around the vessels may be detected with the unaided eye. It is a striking fact that such spleens do not present the dark-red color which we might expect, and such as is seen in kidneys and liver long exposed to passive congestion, but are often bright-red. Before proceeding to the changes observed, it might be well to briefly sketch the connection between the trabeculæ and sheaths of the vessels, as well as that between the latter and the proper reticulum of the pulp, in order to understand the relation of the changes. It is well known that the capsule of the spleen, which surrounds the organ like a dense sack, is folded in at the hilus, at the point of entrance of the vessels and nerves, and thus becomes the sheath of the vessels. It accompanies the branching of the vascular system, being more strongly and voluminously developed around the arteries than around the veins, to their finest subdivisions. Besides the sheaths of the vessels and connected with them is another continuation of the fibrous splenic capsule directed inwards, namely, the trabecular system. The trabeculæ penetrate the spleen in all directions with manifold divisions, and represent a very complex framework. They become firmly attached to the vessels, or run into them, especially the veins. Now with regard to the reticulum of the pulp, we know that it runs into the sheaths and adventitia of the vessels and forms around the cavernous veins a net of circular fine fibres, anastomosing at acute angles and forming a boundary to the blood current. Finally, the pulp-reticulum joins the trabeculæ. From this the relation and interdependence of all these tissues is readily seen. Pathological histology shows that when a general irritation is present in the spleen, all these parts, on account of the continuity and similarity of the tissue, are productively aroused. This is the case in passive congestion of the spleen under consideration. Here, on account of the increased pressure within, all these parts are irritated and there results, as we see, that extensive thickening of the trabeculæ and sheaths of the vessels.

To study the finer details of all these changes the spleen should be hardened first in Müller's fluid and then in alcohol. Sections examined under the microscope show the vessels, chiefly the arteries, to be enormously thickened, from increase of the adventitia and the sheaths which are closely connected with them. This thickening of the latter parts of the vessels forms a very broad zone of connective tissue, which runs over

into the adjacent reticulum of the pulp. Sometimes, particularly in very old spleens, tolerably broad connective-tissue bands are found running out from the sheaths of the vessels into the pulp, and between the fibres of the same fragments of cells. These bands of connective tissue are obviously nothing else than partial thickenings of the reticulum of the pulp continuous with the sheaths of the vessels, the pulp cells having subsequently disappeared, as is the case with the hepatic cells in the periphery of the acini in granular atrophy of the liver. The trabeculæ are greatly thickened, especially where they join the wall of the vessels. Connective-tissue bands also run from the trabeculæ towards the pulp.

These thickenings of the trabeculæ, sheaths of the vessels, and adventitia are found more or less developed in all passive congested spleens, and the density of the latter depends on the degree of these thickenings. Naturally, we must not expect to find all these changes in those spleens in which the passive congestion has suddenly arisen, but only in those where the primary lesion causing the congestion has been slowly developed.

The above are the essential changes, but besides them there are others, namely, of the intima of the vessels, especially the arteries, and when the congestion has lasted a long time, of the veins also. The sort of change of the intima of the arteries is in so far different from that of the veins that in the veins of the parenchyma only a superficial fatty ulceration is to be observed, while the intima of the arteries shows an exquisite growth of all the connective-tissue layers, that is, a true endoarteritis. Virchow has observed similar changes of the veins in other organs.² In valvular diseases of the heart he has seen in the intima of the pulmonary vein growths analogous to those in endoarteritis, also in the portal vein in old passive congestion of the liver.

Nikolaides considers that there is also a thickening of the muscular coat of the arteries, above all of the circular fibres. The Malpighian follicles appear to take no part in the disease only in old congested spleens their border zone appears to be somewhat thickened. But primary changes of the follicles are not observed; we say primary, for the follicles may suffer secondarily in consequence of the thickening of the trabeculæ and vessels.

To recapitulate:—

(1.) The essence of the passive congested spleen, or as it might, perhaps, be better termed, indurated spleen, is a thickening of the trabeculæ and of the sheaths of the vessels and adventitia in connection with them.

(2.) The intima of the vessels, especially that of the arteries, suffers a very early induration, while that of the veins comes on after the congestion has lasted a long time, and has exerted a considerable internal pressure on the wall.

(3.) The reason of the slight hyperæmia of the spleen is to be found in the increase of the muscular coat of the vessels.

TUMOR OF THE TRICUSPID VALVE.

M. Garel³ relates a case of pulmonary disease in which jugular pulsation was accompanied by accentuation of the second sound. No other stethoscopic signs

² *Gesammelte Abhandlungen*, pp. 506, 507.

³ *Revue Mens. de Méd. et de Chir.*, November, 1880.

¹ Virchow's *Archiv*, Band 82, page 455.