central parts are less vascular, and the yellowish-white parenchyma is veined with diffuse purple streaks, and a mottled appearance thus produced."

This mottled appearance is always well marked, but abscesses in the glands we have met for the first time in the above case.

The peculiar sudden variations of temperature alluded to as being common, though indifferent degrees, to the agues and enteric fever, suggests the existence between these two diseases of something more than the ordinary fraternity which links together most of the exanthemata, and it seems probable that this intimate connexion between the so-called paludal diseases and the one now under consideration, is one of a common causation, and that we are to look to vegetable rather than animal decomposition, for the principal factor in the production of the typhoid fever of India.

This subject is of such great importance, more especially as perhaps it is in this circumstance we are to find the clue to the great difficulty of diagnosis in many Indian fevers, that I may be excused for reminding those who have been kind enough to have followed me so long, of some of the chief points of similarity between these two diseases.

Both complaints are characterised by profuse diaphoresis, sudden variation of temperature, intense headache, and sometimes by diarrhœa and vomiting. Enlargement and turgescence of liver and spleen are found in both, and autumn is the period of the year in which they are most prevalent. Still more markedly do the accounts (though meagre) of remittent fever point to a close relationship of symptoms, and those whose attention has been drawn to the subject of enteric fever in this country will agree with me in stating that there is no more common symptom met with in the so-called malarious fevers than a peculiar tenderness and gurgling along the course of the great gut, but especially well marked over the angle of junction of the ileum and cœcum.

Those pathologists who hold that the liver is the starting point within the body, in the evolution of a case of typhoid, will see nothing odd in this connection of the two diseases.

Dr. Harley, in the article above alluded to, points out this connection, and shows the frequent occurrence of typhoid and ague under similar conditions, and from the same locality. He quotes authorities to prove the fact of enteric fever being in some cases ushered in by intermittent symptoms, and *vice versâ*, as well as the occurrence of remittent or intermittent phenomena in the course of a case of typhoid. The truth of these observations we have seen clinically proved in cases of typhoid fever in India: for example, in some instances the primary symptoms were so like those of remittent fever, and the symptoms of typhoid were so conspicuous by theira bsence, as to lead to the conclusion that the case was an example of the former, whereas the post-mortem dissection left no doubt as to its having been a genuine case of the latter; and last year, when my colleague and myself were paying great attention to the subject of enteric fever, we were very much dissapointed by one of our pet cases. Suddenly the temperature fell, and this peculiar occurrence was followed by most of the phenomena of a quotidian ague.

Dr. Harley believes that the variety which he calls paludal enteric fever is the most common. Arguing from a clinical study of this disease in India from its almost non-contagious character, and from some of the above considerations, I am led to the conclusion that though the paludal diseases and enteric fever differ in many important particulars with respect to symptoms, mode of termination, prognosis, mortality, and treatment, yet we should not lose sight of the existence of certain circumstances which point to a common parentage, and furthermore that the non-recognition of this kinsmanship may account for some of the scepticism and a good many of the diagnostic difficulties met with in Indian fevers.

HAZAREEBAUGH, *9th August*, 1872.

DESCRIPTION OF A NEW BULLET FORCEPS.

By Surgeon J. E. TUSON, M.D., F.R.C.S., *2nd N. L. I.*

IN the *Medical Times and Gazette*, August 6th, 1870, I published a description of a bullet extractor which I had devised for the more easy removal of bullets from deep-seated gunshot wounds.

The instruments now in use I have found to be so inefficient on active service, that it occurred to me that a more complete instrument might be introduced to meet all requirements. I have endeavoured, during my late furlough in England, to make further additions and improvements to this bullet extractor, which, I hope, will be a *desideratum* for use in the field. I have shown it to Sir William Fergusson and many eminent surgeons, and it has met entirely with their approval.

The main points in this bullet extractor are these:—

1st.—It is made in the shape of a probe, with prehensile powers, to seize the bullet the moment the instrument touches it.

2nd.—A central rod, which passes down the shaft of the instrument, with a powerful piercing screw to fix the bullet so firmly that it may be extracted even if it be impacted in a bone.

3rd.—A Nelaton's porcelain probe to pass also through the shaft of the instrument, to ascertain whether it be a bullet or no. The advantage of the porcelain probe passing through the shaft of the extractor is, that there can be no possible mistake as to the instrument grasping the ball, whereas in passing a Nelaton's probe into a deep and tortuous wound, it is difficult to pass the usual forceps into the same part, and to be sure that it secures the same substance that the probe came down upon.

4th.—As an additional diagnostic aid to the surgeon, I have added to the case containing the bullet extractor an electric indicator, which also passes through the shaft of the instrument. All these appliances are included in one case to make it more complete and portable. It is far from my wish to take any credit to myself for the introduction into the case of Nelaton's probe, and the electric indicator. I only wished to make the instrument complete for field service, so as to have all the appliances ready for immediate use.

PHTHISIS SIMULATED BY PNEUMONIA OF THE UPPER LOBES; DIAGNOSIS DISCUSSED.

By Assistant Surgeon J. KELLY, M.D., *1st Punjab Infantry.*

PNEUMONIA is a frequent complication of the remittent (or so-called remittent) fever that has been so prevalent since the cold season of 1869-70 at Kohat, Bunnoo, and various other parts of the Punjab. It would be irrelevant here to discuss the nature of the fever, or the grounds upon which the generally received opinion as to the secondary nature of the pneumonia rests; but it is right to state that the pulmonary affection is occasionally considered to be the primary disease, and is spoken of as epidemic pneumonia of a peculiar nature.

The object of this paper is to call attention to the difficulty of distinguishing in some cases pneumonia occurring in the upper lobes from tubercular phthisis, and to state the means employed in the diagnosis; but less with a view to impart than to elicit information from others.

Of 25 cases of secondary pneumonia that were recorded in the 1st Punjab Infantry in the cold season of 1870-71, the disease was limited to the upper lobes in 6; these 6 cases presented many of the local and general characteristics of phthisis, but only one became phthisical.

In cases which have been under observation from an early period, or even in those which come under notice later, but with the fever and other symptoms still high, a careful consideration of the circumstances will remove all doubt; but the cases which present the greatest difficulty are those in which (in addition to dulness or amphoric resonance on percussion, increased vocal resonance, blowing, moist, creaking, or other abnormal sounds

limited to the upper lobe of either lung) there are present great wasting and loss of strength, a fever followed by sweating at night, and cough. An inquiry into the previous history may show that pain, rusty sputa, and other symptoms of pneumonia were absent; and in some cases another cause of perplexity arises by the pulmonary lesion continuing to extend after the fever has subsided or disappeared. In such cases, as there is no single sign or symptom sufficient to guide us to a correct diagnosis, we are obliged to examine the previous history, the present state, and the progress of the case, and form our conclusions from a consideration of them.

PREVIOUS HISTORY.—If the patient had been previously in good health, or, if in bad health, had been free from cough, and owed his bad health to some disease other than phthisis or allied affections, and if he was suddenly attacked by high fever, attended by vomiting, headache, delirium or great restlessness, lumbar and other so-called rheumatic pains, and an infected tongue; and if the general and local symptoms of a disease, which might be either phthisis or pneumonia, supervened upon this fever, or accompanied it from the beginning, we may pretty confidently assume that pneumonia is the disease present; for the only form of phthisis that could simulate such a disease is acute phthisis, or rather that variety of it which is limited to the apex of the lung—a variety which is not accompanied by feverish symptoms that could possibly be confounded with remittent fever. Besides, it is not probable that acute phthisis, had it set in with feverish and other symptoms so severe as to render its discrimination from remittent fever and pneumonia a matter of difficulty, would halt; it would, on the contrary, proceed to a fatal termination, and would not exhibit the pause or abatement assumed to have occurred in the case under consideration. Therefore, the more extensive the pulmonary lesion under the circumstances supposed, and the more severe the feverish symptoms have been, the less likely is it that the pulmonary lesion is due to phthisis. It is also probable that there would be something else in the character of the symptoms or their sequence inconsistent with the history of acute phthisis.

We may therefore conclude that the previous history, when it can be ascertained, is a reliable guide to the diagnosis; but as it cannot be always ascertained, we must have recourse to the other means mentioned.

PRESENT STATE.—A consideration of the present state will include that of the general and local signs and symptoms. The chief general symptoms are prostration, wasting, daily attacks of fever, and sweating.

Prostration can be accounted for by the previous illness. Sometimes it appears to increase after the acute symptoms have abated, because being then more felt by the patient, it is more complained of. Emaciation becomes more apparent when the features resume their natural expression. In both cases, if there is even slight amendment, or at least no real aggravation, we may entertain a favorable view of the case.

It is not unusual for a remittent to be converted into an intermittent fever during convalescence. Sweating also occurs, sometimes, as a part of this fever, and sometimes when no fever is present. Now, I believe it is not possible to distinguish this fever and sweating from those of hectic fever; but if they are attended by amendment, even though slight, or at least by no real aggravation, we may take a favorable view of the case.

The chief local signs and symptoms to be taken into consideration are, the extent and seat of the pulmonary lesion, the presence of tubular or amphoric resonance on percussion, and the character of the expectoration.

The extent of the pulmonary lesion, if at all considerable, would tend to show that the disease was pneumonia, for it is not probable that so great a deposition of tubercles could take place in so short a time, or that having taken place the disease would suddenly halt in its course.

The usual seat of tubercles is in front, in the infra-clavicular space, and at first, at least, they have no tendency to occupy the whole lobe; on the other hand, the pneumonia that occurs as a complication of the remittent fever has a tendency to occupy the whole lobe, and is almost never, except when of tubercular origin, confined to the anterior half of the apex. Secondary pneumonia therefore extends, when occurring at the left side, below the nipple in front, and when occurring at the right side, to the third interspace in front; behind, it extends a few inches below the apex. It is true that it is sometimes limited to the anterior halves of the upper lobes, but then it is not confined to the apex, but extends to the lowest limit of the lobes; in some cases, again, it occupies only a small part of the front of the lung, but then it occupies the posterior surface as well, and a larger portion of it, which is not the case in phthisis. The form most likely to be mistaken for phthisis is that in which the disease is limited to the anterior half of the apex, this being usually of tubercular origin or preceded by tubercles; but it is probable that some other circumstances would be present to indicate its nature.

Tubular or amphoric resonance on percussion, if due to a cavity, would be accompanied by purulent and nummular sputa, and also by gurgling, cavernous breathing, and pectoriloquy; if found over an extensive area, it would indicate an enormous cavity, and the other symptoms would be proportionally severe, and moreover there would be some local depression over the cavity, some displacement of the heart, and disease of the other lung. On the other hand, amphoric resonance on percussion in pneumonia usually indicates a mild* disease; the other symptoms would consequently be mild, and those mentioned as being present in the case of a cavity, would be absent, and the amphoric resonance would disappear after a short time. The larger the space over which it was found, the greater would be the probability of its being due to pneumonia. For remarks on expectoration, see above.

PROGRESS OF THE CASE.—This subject may be considered under the heads of aggravation and amendment.

With aggravation of the pulmonary and feverish symptoms together we are not now concerned, but only with aggravation of the former after the subsidence or disappearance of the fever—an occurrence occasionally observed, and giving rise to much perplexity. Such an event could not occur in tubercular phthisis, because the pulmonary lesion, being the exciting cause of the feverish and other symptoms, could not become aggravated without a corresponding aggravation of the general symptoms; but it is different in the case of secondary pneumonia. We may therefore pretty confidently pronounce the pulmonary lesion, under the circumstances above stated, to be due to secondary pneumonia and not to phthisis.

Amendment of the pulmonary lesion would tend to show that it was due to pneumonia.

A long period (some weeks) elapsing without much perceptible change taking place in the pulmonary lesion, must have its significance read by a consideration of the other circumstances of the case.

In conclusion, a short summary may not be out of place:—

1*st*.—Pneumonia, occurring as a complication of remittent fever when seated in the upper lobes, presents many of the local and general signs and symptoms of phthisis.

2*nd*.—The diagnosis would present little difficulty if the case were seen from the beginning, or if the previous history could be ascertained.

3*rd*.—The diagnosis could also be made by observing the progress of the case if there were no necessity for promptitude; but for purposes of treatment and others an early recognition of its nature is always demanded.

4*th*.—From the present state the diagnosis must, in many

* It would occupy too much space to bring forward the cases and arguments upon which the significance of amphoric resonance, above stated, is founded.

cases be made. The local signs and symptoms must mainly be relied upon if we are limited to a single examination, and consequently under such circumstances the diagnosis is beset with difficulties.

CONGENITAL ABSENCE OF THE LEFT KIDNEY.

By Assistant Surgeon THOMAS L. WEIR,
Bombay Medical Service.

WHEN making a post-mortem examination on the body of a lunatic named Mustan Sidhie, who died in the asylum on the 4th September of consumption, I ascertained the left kidney was absent, neither could I find any trace of an ureter after the most careful dissection. The right kidney was a good deal enlarged and weighed 5oz. 2drs.; the hilum was situated on the anterior surface; it did not differ in any other respect from an ordinary healthy one; its ureter was slightly increased in diameter, and opened into the bladder in the normal position and in the usual way.

This is a very rare anomaly: it is not at all uncommon to find but a "shell" of the organ left as the result of disease. These two conditions might at first sight be mistaken for one another; but the presence or absence of the ureter will remove all possibility of their being confounded.

IRRITANT CAUSES OF DISEASE.

By Surgeon C. M. JESSOP, *4th Hussars.*

(Continued from page 225.)

Elsewhere* I have described the kinds of diet used by different races and creeds. The object I had in view was to elicit that diet, faulty in some way, had been a principal predisposing cause of beri-beri, whether or not the exciting cause I have named is the true one, and that its geographical range is not defined within certain parallels of latitude and longitude, but that anasarcous disease will prevail in any race (I might almost add any climate; for what is scurvy but the effect of mal-nutrition?) wherein the minimu mvariation in diet obtains. In support, therefore, of this statement we may now peruse the testimony of Dr. Anderson, of Singapore, who has had unusual opportunities of observing this malady over an extended area in the Malayan Archipelago, and to whose courtesy I am indebted for the following observations:—

"The symptoms I have observed are these: the patient complains first of lassitude, heaviness in the calves of the legs, as if a weight was attached to the knee-joint, formication, and inability to walk. After a few days these symptoms extended upwards to the middle of the thigh, when the hands and arms became similarly affected; the skin over the lower part of the abdomen is the seat of formication and insensible to pain, if a hard pinch is given. The bowels become sluggish; there is loss of appetite; frequent vomiting, nothing being retained in the stomach; urine scanty; continued thirst, but difficulty in swallowing; laborious breathing; fluttering motions of the heart, sounds irregular and muffled; œdema of the legs and face; death, generally speaking, occurs suddenly: the mental faculties are perfect to the last.

"I conceive, from practical observation of over one thousand cases, and from post-mortem examinations, the disease to be climatic, and its essential nature to be serous effusion within the dura-mater spinalis; there is almost always effusion within the pericardium and pleura, and congestion of the kidneys.

"In these cases the gait in walking is peculiar; the toes are placed first on the ground, and the heels afterwards, with a sudden jerking motion, which has given rise in the Celebes to the name for this disease of 'glass legs,' that is, the patient appears as if he was walking over pieces of broken glass, and afraid to injure his feet.

"It attacks Europeans as well as natives, and I know of no remedy that has the slightest influence on this disease. The only plan for its relief seems to be removal of the patient to a higher level of country, as has been well illustrated in Java, where this disease is prevalent.

"The longest duration of a case of beri-beri that I have seen was three years, and ended in recovery; the shortest to my recollection, without reference to notes, was ten days."

Dr. Anderson further informed me that all natives died alike, whether Javanese, Malays, Indians, or others, but that very few Chinese fell victims to the complaint; he had attended them, but they were never bad cases. The remedial measures consisted in good meat food and plenty of spirit; this latter the natives were averse to taking.

Dr. Anderson treated this malady in the islands of Sumatra, Java, Celebes, &c. It also exists in China. Fourteen years ago I treated Indians in Hong-Kong, and have seen the complaint in Malays off Borneo: it will therefore be seen that its geographical area is extensive, and in a direction not usually described in medical books. In my opinion the malady is due to mal-nutrition, and closely allied to, if it be not, "tropical-scurvy." Dr. Anderson entrusted no theory to me more than that the disease was "climatic." He intimated his intention to publish a treatise on the subject; it is to be hoped that he will soon do so, and put his theory into a more definite form.

It has been shown that Mussulmans died in Labunan, and that Tamils died in Hong-Kong, and both from the want of fresh meat, or some compensating agent or condition; and that although Dr. Anderson, in his extensive experience of nearly fifteen hundred cases, had attended Chinese, yet the number was so few and the cases so slight, they had made no impression on his memory till especially asked the question as to whether or not they suffered in like proportion; and as they did not suffer to the same extent, it would seem that the Chinese mode of living has something to do with their immunity from the peculiar train of symptoms under consideration.

The Chinese live well, *eating anything and everything*, consuming large quantities of fatty matters, vegetables, &c., &c. In this way they insulate their bodies both externally and internally from the effects of the sun's rays. Natives in many parts of the world anoint their bodies with oil, and though a very ancient custom of respect, the origin is doubtless to be found in the instinct of self-preservation continued to this day among some people as a preservative of health. I have seen Indians in China do this, but I cannot say I ever observed the custom among the Chinese; and, from *a priori* reasoning on their mode of living, they do not need it, because, if capable of eating largely of all kinds of food, their digestive organs must be in good condition to enable them to take and digest a large supply of fatty matters and vegetables, and when this is the case, the natural secretion of the skin's oil-glands is sufficient for the purposes of nature: further, the integrity of the nervous system is provided for by the storage or accumulation of fat in certain internal parts of the body for the purpose of retaining a uniform degree of natural heat.

In cold climates, persons who eat plenty of fat in one way or another, and vegetables, are always the healthiest; the same holds good for them in hot climates. Persons who do not eat fat in a sufficient quantity, or do not digest what they take, are more or less querulous. This directly arises from an impoverished nervous system which renders them liable to any evil influences to which they may be subjected.

The chemical composition of nervous matter consists of a large quantity of fatty matter—the grey more than the white; and absence of fat in any diet must tend to have an important influence on this tissue, and presumably on that kind first which contains the most.

* Army Blue-Book for 1869: "Report on Sanitary Condition of Labuan."