An Address ON VISIBLE SIGNS OF VISCERAL DISEASE.

DELIVERED TO THE STRATFORD DIVISION OF THE BRITISH
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[AFTER some introductory remarks, Dr. Galloway proceeded:]

It must have been the experience of most of us while watching our patients during the course of an illness, especially if the illness happened to be a prolonged one, to note the occurrence of intercurrent troubles which at the time seemed to have little or no relationship to the malady from which the patient was suffering, but which on after-thought have appeared to be connected in some way with the main cause of disease. The idea would then certainly have occurred that had we been in the position to understand the relationships of the intercurrent affection, it would have served as a sign, and we should have become possessed of information as to the nature and the progress of our patient's illness, and even of suggestions for effective treatment. I wish to draw your attention this evening to some of these imperfectly recognized indications of disease.

INDICATIONS IN DISEASES OF THE LIVER.

It has happened during the last few months that I have had under my observation in Charing Cross Hospital and elsewhere a number of cases of disease of the liver. It will suit our purpose this evening, therefore, if I concentrate my remarks on indications occurring in the course of liver disease, and use the cases to which I have referred as illustrations.

THE BLOOD-PURIFYING FUNCTION OF THE LIVER.

There are few organs in the body to which are ascribed, rightly or wrongly, so many different functions as the liver. Two of its great duties—namely, those of dealing with the carbohydrates and the proteids absorbed from the food—have undergone prolonged and critical investigation. But there is another important service which this organ has to fulfil not so often emphasized—namely, that of acting as a protector to the organism by removing noxious substances derived from the alimentary tract, contained in the blood passing into it through the portal vein. This blood-purifying function is constantly in action, and under various circumstances no doubt has to bear a serious strain. Some of these noxious materials gain access to the body in the most direct form—namely, by being taken in food. Others are produced during the normal processes of digestion; still others by defects in function of the alimentary tract, depending on the faulty action of the mucous membranes and other tissues; others as the result of the action of bacteria. The importance of the liver as a great blood-purifying agent deserves special emphasis, as does also the fact that this blood-purifying process is seriously affected in many diseases of the liver.

INFLUENCE OF OBSTRUCTION OF THE PORTAL CIRCULATION ON THE FUNCTION OF THE LIVER.

It is especially in those diseases in which the portal circulation becomes seriously obstructed that we should naturally expect to find indications of failure of this function. Of the diseases which bring about serious portal obstruction, the varieties of cirrhosis of the liver occur, perhaps, most commonly in practice. In a case of cirrhosis of the gland, its chief functions are interfered with by the gradual destruction of the liver cells from various causes. But the peculiar function of blood purification is especially disturbed for another reason. The growth of fibrous tissue in the liver characteristic of cirrhosis in many cases commences round the terminal branches of the portal vein, but in all cases seriously compresses these vessels. For this reason blood has difficulty in passing through the portal circulation, and

the liver does not receive its proper supply of blood from the stomach and intestines. As a consequence of the obstruction thus placed in the way, attempts are made by the blood returning from the alimentary tract to seek collateral channels in order to regain the systemic venous circulation. Some of these collateral channels are well known—for instance, the passage of the intestinal blood from the inferior mesenteric vein to the radicles of the internal pudic veins by the route of the haemorrhoidal venules is mentioned in all textbooks, and students are carefully taught to recognize as a symptom of cirrhosis of the liver, bleeding from the mucous membrane of the lower bowel and the formation of actual haemorrhoids. Another very important channel permitting of a collateral return of blood is the vein or veins which may be opened out in the round ligament of the liver, passing from its under surface to the umbilicus, and communicating with the subcutaneous veins at that point. In addition to this, however, there are many other courses which may be opened out for the return of the portal blood to the vena cava without passing through the liver. They consist mainly of communications between the portal vein and the systemic veins in the retroperitoneal regions and the under surface of the diaphragm, especially where the peritoneal coats do not intervene between visceral and parietal surfaces.

The general result of the opening out of these by-paths, and the development of this collateral circulation is that much blood, not only containing the products of digestion in the alimentary tract requiring the finishing touches given to them in the liver to render them useful to the body but many other more definitely noxious substances, is poured into the general circulation without the interposition of the liver at all. The presence of these substances in the circulating blood cannot be regarded as being otherwise than harmful.

RELATION OF CERTAIN CUTANEOUS ERUPTIONS TO DISORDERS OF THE ALIMENTARY TRACT.

A totally different series of observations has formed the basis of the conclusion that many eruptions or diseases of the skin, some of them of the utmost gravity, are closely connected with or are directly produced by the absorption of poisonous substances from the alimentary tract. One of the most striking examples is the sudden eruption of urticaria frequently seen after the ingestion of decomposed or poisonous foods. It must have been an early experience to most of us, especially while acting as house-physicians in our hospitals, to have been brought face to face with cases of what may be called "Saturday night" eruptions of urticaria, rendering almost unrecognizable the features of individuals whose ideas of riotous living consisted in an indulgence, let us say, of winks and beer.

But, in addition to such very obvious examples, a large number of cases of erythema, especially of the exudative variety, are traceable to disorders of the gastro-intestinal tract, and are the consequences of changes of more complicated character than those following the ingestion of harmful foods. These affections of the skin vary from the simplest varieties of urticaria and erythema to the more severe manifestations of the latter, with exudation of the contents of the blood vessels, in other cases producing atrophy or rapid destruction of the skin itself.

Bearing these two series of observations in mind, and recognizing, first, the importance of the liver as a blood-purifying organ, and, secondly, that many cases of exudative erythema have close relationship with disease of the gastro-intestinal tract, let us inquire whether cutaneous manifestations of the erythematous type occur during the course of diseases of the liver, especially in those cases in which the portal blood passes into the general, and therefore the cutaneous, circulation, without being subjected to the normal cleansing action performed by that organ.

I.—Eruptions of the Type—*Erythema Exudativum*—Occurring in Case of Disease of the Liver with Portal Obstruction, for example, *Cirrhosis*.

1. *Urticaria*.—Perhaps I should ask indulgence for mentioning attacks of urticaria under this heading, but, for the purposes of simplification and on account of the close relationships of urticaria to *erythema exudativum*, it will

be more convenient to classify such eruptions under this heading. Urticaria in its various forms seems to be an uncommon affection in liver disease. In my own experience, I can remember one case only in which urticaria occurred. This patient, who suffered from cirrhosis of the liver, manifested a troublesome eruption of urticaria with small lesions, lasting for many weeks, producing a considerable degree of pruritus and discomfort. Dr. Rolleston mentions urticaria occurring in the course of jaundice, and draws attention to the peculiar colour of the wheals in those circumstances. It is probable, however, that the allied eruptions of the erythema multiforme type are more easily produced by the action of the circulating poisons in liver disease than the definite urticarial lesion.

2. *Erythema Exudativum*.—The occurrence of eruptions of this type is not uncommon in cases of cirrhosis of the liver. The eruption usually makes its appearance as an erythema arranged in discs, or as segments of circles, occurring most profusely on the trunk, but, conforming to the type of the malady, also making its appearance on the extensor surfaces of the extremities. It varies in severity, sometimes being very superficial and evanescent, at other times producing lesions elevated above the surface of the skin, and remaining obvious for weeks. In the slighter cases little discomfort is complained of. In some cases, however, the patients complain much of the irritation and pruritus produced by this condition. An attack of the eruption usually does not last more than ten days or a fortnight, but is apt to recur. Recently I have had under my care in the hospital a patient suffering from cirrhosis of the liver who had recurrent attacks of the eruption during the whole of the time he was in the ward—between two and three months. The eruption is frequently complicated by jaundice.

3. *Erythema Exudativum Haemorrhagicum*.—Bearing in mind the evidence of serious alterations in the character of the blood shown by the indications of destruction of red blood cells, and the tendency to haemorrhage in the later stages of organic liver disease, it is not at all surprising that the erythematous eruptions become purpuric. The purpuric erythema in such cases varies from lesions which show a small amount of blood-staining only, through varying degrees, to cases in which the lesions are intensely haemorrhagic, occurring as elevated spots or patches having the colour of a superficial haematoma.

As an example of the milder variety I may cite a case of a gentleman of about the age of 60 years who came recently under observation. His occupation in life was a sedentary one. He was in comfortable circumstances, had indulged freely in the pleasures of the table, and had taken considerable quantities of alcoholic beverages daily. He was, however, with one slight exception, supposed to be in good health. My friend who brought this patient to see me told me that for years there had been a slight scaly eruption of eczematous nature on various parts of the trunk and extremities, but it had caused so little trouble that no definite treatment had ever been required. On returning from an autumn holiday in Scotland, his attention was drawn to the fact that the patches of superficial scalliness had become much more pronounced. On examination it was seen that the slight scaly patches, which were declared to be of long standing, were definitely blood stained; in fact, the previous desquamating lesions were now erythematous, and the erythema had passed on to definite extravasation of blood—purpura. Noting this suspicious alteration, we examined the patient thoroughly, and found that the edge of the liver could be felt 2 in. below the costal margin, and that he showed signs of an early stage of cirrhosis of the liver.

As an example of the more severe types of this indication, I may mention a case occurring some three or four years ago. This patient, a man, aged about 45, was employed as a licensed victualler. He was a man of active habits, and had taken a considerable amount of interest in the public affairs of his district. The reason that I was summoned to see him by his medical attendant was that a severe purpuric eruption had appeared on his body suddenly. When I saw him it was clear that the patient was seriously ill. There were numerous patches of intense purpura varying in size from points to areas as large as the palm of the hand, well raised above the surrounding surfaces, of the characteristic dark-red colour, and with definite circinate outlines. The parts most severely affected were the lower parts of the trunk and the upper parts of the thighs. On further inquiry, the important evidence

was forthcoming that about the same time, or shortly before the eruption had commenced to make its appearance, there had been severe loss of blood from the rectum, which was ascribed to the occurrence of internal haemorrhoids. On examining the patient the liver could be felt considerably enlarged, with a characteristic firm, slightly irregular, margin. There could be no doubt of the diagnosis—namely, that he had cirrhosis of the liver.

In such a case as this the temptation is very strong to explain the phenomena of the disease on the basis that the cirrhosis has advanced to such an extent as to be a serious impediment to the return of the portal blood. As the result of the portal obstruction the by-paths through the veins in the lower portion of the bowel and in other situations are opened out; the obstructed portal blood, containing the materials resulting from the digestive processes, which should have been rendered innocuous by passing through the liver, gains the general circulation without having been subjected to the usual purifying influence. Simultaneously with the bleeding from the bowel, and the formation of a "haemorrhoidal" condition of the mucous membrane, there is the appearance of the haemorrhagic eruption of the skin, strongly suggesting that the blood from the portal vein directly returned to the general circulation was the cause of the alarming cutaneous malady.

It may be of interest to note that in spite of the intensity of the haemorrhagic eruption, and in spite of the risks the patient ran of necrosis of the purpuric areas, he recovered, and a short time ago was reported to be in comparatively good health, able to carry on his business, and continuing to be interested in the public affairs of his district.

In both these cases the recognition of the visible sign led to the diagnosis of the underlying disease.

4. *Erythema leading to Atrophy of the Skin*.—A tendency to symmetrical congestion of the central portions of the face with rosacea has long been recognized as occurring in cirrhotic diseases of the liver, especially in those cases in which alcohol has been taken to excess. Occasionally there develops in this region a very different type of erythema, leading in severe cases to obvious atrophy of the skin. To this condition it has been the habit to apply the term "*lupus erythematosus*"—an unfortunate name, as it suggests a close relationship to *lupus vulgaris*. The latter disease has long been clearly recognized as a definite tuberculosis of the skin; *lupus erythematosus*, on the other hand, is entirely distinct from *lupus vulgaris*; there is no direct relationship, and possibly only in some cases a remote connexion with tuberculous diseases of other organs. The disease is much more correctly regarded as a member of the erythematous group, the inflammation and exudation being of a peculiar type, leading to atrophy of the connective tissues and alterations in the character of the epithelium.

The blood changes occurring in the cirrhotic diseases of the liver are of varying severity, and no doubt also of varying character. It will not be surprising, then, to find that as the more ordinary types of erythema are associated with these cases of liver disease, this more unusual type of symmetrical erythema, followed by atrophy, has been observed. The association is rare, but it does occur.

On one occasion I admitted into Charing Cross Hospital a woman of about 35 years of age suffering from an extensive eruption of this atrophying erythema—*lupus erythematosus* so-called. It affected the face, having the often-described "bat's wing" distribution, but in addition many patches occurred on the trunk and also appeared on the forearms, the hands and the lower extremities symmetrically. It was rapid in its onset, and was accompanied by a very severe disturbance of health, with prolonged fever, loss of flesh, failure in nutrition—well recognized symptoms in severe and widespread cases of "*lupus erythematosus*." Careful examination revealed no evidence of visceral disease beyond a certain amount of bronchial catarrh. There were no signs of recognizable tuberculosis either on admission or at any period of her illness. The patient remained under my close observation for about two years. For the first two months she was seriously ill, and then gradually began to improve; many of the cutaneous lesions healed without ulceration, but leaving atrophy, and she was able to get up and go home; but she remained in indifferent health, and I admitted her into hospital under my care on several occasions. About eight months after the commencement of her illness I found that symptoms of disease of the liver were manifesting themselves. The liver was enlarged, and gradually the characteristic signs of cirrhosis became manifest. On further inquiry I now found, much to my surprise, that the

patient was an inveterate alcoholic. While under care in the hospital nothing of the kind was suspected; she was a woman of better education than is usual in hospital patients; she was married, the mother of a family, and gave rise to no suspicion of alcoholism. But when at home and by herself I learned that she indulged to inordinate excess in alcohol, and indeed was rarely free from alcoholic influence except when under treatment in hospital. She developed the usual symptoms of cirrhosis of the liver, with loss of flesh, occasional attacks of jaundice, and finally ascites, and died of the disease. After the first outburst the cutaneous condition never became so acute, but recurrences took place to the end of her life, usually on other parts of the body than the face.

This case is very noteworthy. The probability is very great that the cutaneous condition was connected with her visceral disease, and we should at the commencement have suspected more strongly than we did that she suffered from serious visceral disease. (Figs. 1 and 2.)

I notice within the last year or two, with much satisfaction, that when a case of this form of erythema is brought forward at medical societies for demonstration, one of the questions asked is, What is the condition of the kidneys? We should now go

II.—Dilatation of Superficial Blood Vessels as an Indication of Diseases of the Liver.

In cases of disease of the liver there occur several forms of dilatation of the superficial veins, some of which have considerable importance as indications of disease.

1. A very striking type is the enlargement of the subcutaneous veins of the abdomen forming collateral channels for the return of blood with a general course from the groin upwards to the intercostal veins and even towards the axilla. The veins which are opened up to produce these channels are the anastomosing veins between the deep and superficial epigastric system on the one hand, and the superior epigastric and intercostal veins on the other. These subcutaneous channels frequently become very large and must have been observed by all. The dilatation of these subcutaneous veins must be regarded as evidence of obstruction to the vena cava rather than the portal circulation simply. It must be remembered in many cases of dis-

ease of the liver, even of cirrhosis, that direct pressure upon the vena cava may result in various ways; and these enlarged veins may aid in the return not only of

Fig. 1.—Symmetrical erythema of the face leading to atrophy of the skin, associated with cirrhosis of the liver.

Fig. 2.—The forearms and hands from the same case as Fig. 1. (From water-colour drawings by Miss Mabel Green.)

further, and in all such cases inquire not only as to the presence or absence of albumen in the urine, but as to the state of the internal viscera generally, not forgetting the liver.

blood of the systemic circulation of the lower part of the body, but also of blood which should find its way into the portal vein.

2. A second form of dilatation of veins on a much

smaller scale is sometimes noted. This type is produced by the dilatation of venules rather than of the larger veins, and is noted usually in two situations. One of these—the most significant—is the dilatation of venules radiating from the umbilicus, and permitting blood to pass backwards from the liver through its round ligament into the subcutaneous veins of the abdomen. It is especially likely to occur in cases of obstruction to the portal circulation arising in the liver itself. It permits of the passage of portal blood into the general circulation without passing through the liver, and has therefore special significance. This condition is so remarkable that it has received such picturesque names as "*caput Medusae*," or "*cirsomphalos*." The second type of enlargement of venules occurs along the lower border of the thorax, and is known by the name of the "costal fringe of venules." It occurs, however, in many conditions causing venous obstruction and is not specially significant of hepatic disease.

3. A third and very significant form of vascular disturbance gives rise to localized dilatation of the capillary vessels of the cutaneous surface. These telangiectases are of two chief varieties, one of them resembles the spider-like telangiectases so frequently observed in the skin of the face in young children. They consist of very fine straggling venules, usually radiating from a central red and slightly elevated point. This central punctum is actually a small angioma, and the straggling blood vessels may extend a quarter of an inch or more in various directions round it. These spider-like angiomata are not always permanent. They sometimes disappear in a few weeks after formation, and probably do so by coagulation of the blood in the vessels and gradual absorption of the necrosed tissue. They sometimes occur in considerable numbers in cases of cirrhosis of the liver, and their rapid appearance should be looked upon as an indication of some importance.

Another type of angioma affecting the surface in diseases of the abdominal viscera appears as localized vascular papules. They are formed by a small group of dilated cutaneous capillaries, and are very likely due to degeneration of their walls. In the haemorrhagic state occurring in the later stages of liver disease they are said occasionally to bleed. They are of importance not only as being an indication of some value of vascular degeneration produced by visceral changes, but at the present time they are worthy of special study as presenting some analogy to the cases of punctiform cutaneous telangiectases with a tendency to haemorrhage occurring in family groups, to which attention has been drawn by Professor Osler, Dr. Kelly, and other writers.

III.—Indications Occurring in the Course of the Lymphatic Vessels.

While much attention must be given to the distribution of the blood vessels and to alteration in their structure and their contents, indications depending upon the lymphatic circulation should not be lost sight of. In cases of malignant disease, especially in carcinoma affecting the abdominal viscera, the lymphatic channels direct the lymph stream towards the retroperitoneal glands. But, as in the case of the blood stream, the ordinary direction of the flow of lymph may be changed, retrograde currents are produced, and collateral channels forced open. Of these a very important lymph stream may find its way from the liver through the round ligament into the subcutaneous lymphatics of the abdomen, and thus it comes about not very infrequently that an early sign of malignant disease in the neighbourhood of the bile ducts and of the gall bladder is the appearance of an indurated patch involving, or in the immediate neighbourhood of, the umbilicus. Cases could be cited in which this secondary growth was the first definite indication that some obscure disease of the liver or in its neighbourhood was definitely of malignant character.

The secondary new growth occurring at the umbilicus is perhaps the most striking of the external indications of the internal tumour. It is well to bear in mind, however, that lymph containing the cancerous cells finds its way from the subperitoneal lymph vessels in the same directions as the blood stream when obstructed either in the vena cava or in the portal vein. This collateral lymph circulation takes the opposite direction to the normal current, and is probably caused by the obstruction of the retroperitoneal lymph vessels and glands as the

result of secondary growth. Thus it comes about that nodules are discovered on the lateral aspects of the thorax and the abdomen which may be of the utmost significance in forming a diagnosis as to the internal trouble. These little tumours may be single or very sparsely scattered when first observed, but not infrequently occur in great numbers during the course of the disease. A search for these nodules should always be made in cases of abdominal disease, especially if any doubt as to its character is entertained.

I may give an example of the importance of observing this sign:

A man of a little over 50 years of age was recently sent into the hospital under my care by two colleagues who had seen him in consultation at his home. The patient had been a heavy drinker, and suffered from symptoms strongly suggestive of cirrhosis of the liver. The suggestion made as to diagnosis was that he had cirrhosis of the liver complicated by tuberculosis. On admission to the hospital, the symptoms of his malady were quite in keeping with the diagnosis suggested. It was noted, however, that he had a small, firm, subcutaneous nodule on the right side in the infra-axillary region 2 or 3 in. above the costal margin. In a short time one or two other very minute nodules made their appearance in the neighbourhood of the original one. A week or two later he developed suddenly an extraordinary amount of local oedema of the lower and back portion of the chest. The oedema was so firm as to suggest a collection of free fluid, and an exploratory puncture was made to clear up this point in the diagnosis. In a short time the oedema began to be absorbed, and, as it disappeared, the portion of the chest wall previously swollen was found to be studded with minute hard nodules. These increased in size, and at the time of his death these subcutaneous growths could be numbered by the score. The actual cause of his disease was carcinoma, commencing in the right suprarenal body, involving the liver secondarily, and causing finally much disorganization of the structures both of the right side of the thorax and the abdomen. There was no cirrhosis of the liver nor tuberculosis.

The correct diagnosis was arrived at only when the original single firm subcutaneous nodule was noted.

IV.—Primary New Formations in Disease of the Liver: Xanthoma.

I have been led to mention the occurrence of metastatic nodules on the surface of the body as giving indications of the nature of internal diseases, but it must not be forgotten that in various diseases of the liver, sometimes producing organic change, at other times apparently simply functional in character, and often associated with glycosuria, there appears on the surface of the body the curious growth known as xanthoma. Everyone has known cases of the form of the disease commonly occurring at the inner angle of the lower eyelid, known as "*xanthoma palpebrarum*." This type of xanthoma occurs in the majority of cases without any recognizable disturbance of health. There are forms of the disease, however, probably differing in some respect from that mentioned, which occur in other parts of the body, sometimes localized in flat patches on the elbows, the knees, and other bony prominences, in other cases occurring as discrete localized tumours, sometimes in large numbers over the whole cutaneous surface. The information obtained by the histological examination of xanthoma is difficult to interpret. The tumours in some respects suggest that they are produced by degenerative changes occurring in the connective tissues, with the collection of a peculiar fatty material within the cells, and the disintegration of both white and yellow elastic fibres, strongly suggestive of a toxic influence. In other respects the evidences of a degenerative change are not so striking, and the affected tissues seem capable of recovering. The general evidence, however, is strongly in favour of the fact that the majority of cases of the widely spread form of the disease are accompanied by important morbid changes of metabolism, especially associated with the functions of the liver. The occurrence of xanthoma anywhere excepting on the eyelids must always demand a careful examination of the abdominal organs, and of their functions.

V.—Anomalies of Pigmentation as Signs of Visceral Disease.

The indications derived from alterations in the colour of the patient are numerous, and I can only refer briefly to the subject in this place.

Haemochromatosis.—One of the most striking discolorations observed seems to be due to the destruction of the red blood cells in diseases of the alimentary tract and

liver. The breaking down of the haemoglobin produces various forms of abnormal pigment, which become deposited throughout the body and in the skin. The condition is known as "haemochromatosis," and the alteration in the colour of the skin is sometimes of a most remarkable character. If recognized, it may serve as an important sign of the internal disorder. Most of the cases already described have been associated with disease of the liver or of the intestinal tract, not infrequently associated with glycosuria. This association, however, does not seem to be always necessary.

I have under observation now a patient suffering from the disease, whom I first was called to see by one of my colleagues in the hospital.

She was a young woman, a Board School teacher, of about 24 years of age, emaciated to an extreme degree. On further examination, the abdomen was noted to be greatly distended, and obviously contained fluid. The most striking feature, however, was the fact that she had become deeply pigmented from head to foot. The pigmentation, as usual, was most intense in the flexures of the body, where the tint could be compared to a very deep grey-blue slate colour. It was not of the usual brown or black tint characteristic of the deposit of melanin. An abdominal section was performed for the purpose of removing the collection of fluid and of exploring the abdomen. A large quantity of free, clear fluid, containing a few flakes of lymph was evacuated. The abdominal viscera, so far as could be seen, were normal with the exception that in the upper and back part of the abdominal cavity and on the under surface of the liver a small quantity of lymph lining the peritoneal surface and a few adhesions were seen. The operation was concluded, and I am glad to say that the patient made an uninterrupted recovery not only from the operation but of her general health. She soon commenced to increase in weight, to take her food properly, and was discharged from the hospital. She is still under my observation, having resumed her work as a Board School teacher eighteen months ago. She is in vigorous health, working eight or nine hours or more in the day in spite of my protests. The pigmentation gradually disappeared, and now can be made out with difficulty. The patient, however, says that the skin has never quite regained its original colour.

This case is very instructive as an illustration of the subject to which I have directed your attention. The unnatural pigmentation suggested a more accurate diagnosis than had previously been made, as the patient had been suspected of suffering from complications associated with ovarian cyst. It is possible that some cases of this abnormal pigmentation may arise from chronic inflammatory processes involving the upper regions of the abdomen, the neighbourhood of the suprarenal capsules and the liver, and are not necessarily fatal in their results.

Jaundice.—The other great anomaly of pigmentation which will, I am sure, be in your mind is jaundice, the most common and most important of the indications of liver disease. The consideration of the indications afforded by the varieties of jaundice I have purposely omitted from our discussion this evening. The subject is a complicated one, and worthy of detailed consideration, both from the point of view of accurate diagnosis and also because jaundice is associated with severe cutaneous troubles, which may be greatly alleviated by properly advised treatment.

This sketch that I have attempted to make this evening is incomplete, and leaves many parts to be filled up, but I hope that I have been able to show the importance of attempting to interpret some of the neglected signs of visceral disease.

A RETURN recently issued by the Minister of the Interior for Egypt, and relating to births and deaths during 1907 in the principal towns of that country, shows a birth-rate for natives of 43.7 per 1,000 on an estimated population of 1,530,672, and a death-rate, calculated on the same basis, of 36.7 per 1,000. During the same period the infant mortality was 309 per 1,000 registered births. The foreigners in the same towns are calculated as numbering 104,051 persons, the death-rate given being 24.4 per 1,000. In this case, however, the population is taken as being the same as the census of 1897, so the percentage figures are without material interest.

AN ANALYSIS OF 263 CASES OF TABES.

BY

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In this communication I have analysed 263 cases of tabes dorsalis met with in hospital and private practice. The notes of the earlier cases are necessarily in some respects incomplete, but all the later cases have been carefully studied. Further, I have followed out the cases, so far as it has been possible to do so, and brought them up to date. I have consequently been able to trace the course of the disease during a period of several years, in a considerable proportion of the 263 cases, and, in most of the fatal cases, to give the total duration and the immediate cause of death.

TYPE OF THE DISEASE.

Of the 263 cases, 192, or 73 per cent., were in the ataxic, and 71, or 22.9 per cent., in the preataxic, stage of the disease.

SEX AND AGE.

Sex.—239, or 90.8 per cent. of the 263 cases, were males, and 24, or 9.1 per cent., females.

Age at Onset.—The age at which the first symptoms of tabes were said to have developed was noted in 258 of the 263 cases, and is shown in Table I and Fig. 1. In 5 of the

Fig. 1.—Graphic representation of the age at onset in 258 cases of tabes.

263 cases the age at which the first symptoms developed is not stated in the notes.

TABLE I.—Age at Onset in 258 Cases of Tabes.

Age.	No. of Cases.	Per Cent.
From 20 to 30 years ...	37	14.3
„ 31 „ 40 „ ...	121	46.8
„ 41 „ 50 „ ...	70	27.0
„ 51 „ 60 „ ...	25	9.6
Above 60 „ ...	5	1.9
Total ...	253	99.6

In the 258 cases in which the age at onset was ascertained, the disease commenced in 191 cases, or 73.6 per cent., between the ages of 30 and 50. In one case, in which the patient not only denied syphilis and gonorrhoea, but stated that he had never been exposed to infection, in which there were no appearances indicative of syphilitic disease, and in which there was no evidence of inherited syphilis, the disease commenced at the early age of 21. In one case in which the symptoms were in every way typical, the disease commenced at the age of 66; and in another case, characterized by marked ataxia, Rombergism, loss of the knee-jerk, and the Argyll-Robertson condition of the pupils, but in which there were no lightning pains, at the remarkably advanced age of 73.

SOCIAL STATUS.

Married, Widowed, or Single.—In 159, or 60.4 per cent., of the 263 cases, the patients were married; in 18 cases, or