	Average Height on Admission.	Average Weights on Admission.				Former Average Weights.			
		Average Weight on Admission.	Percentage above 10½ st. in Males, 8½ st. in Females.	Percentage exactly 10½ st. in Males, 8½ st. in Females.	Percentage below 10½ st. in Males, 8½ st. in Females.	Average of Former Ordinary Weights.	Percentage above 10½ st. in Males, 8½ st. in Females.	Percentage exactly 10½ st. in Males, 8½ st. in Females.	Percentage below 10½ st. in Males, 8½ st. in Females.
500 male patients, 25 years old and upwards, all with tubercle bacilli in their sputum	ft. in. 5 7	st. lb. oz. 9 1 13	10.6	0.6	88.8	st. lb. oz. 10 5 9	40.8	3.2	56.0
100 female patients, 25 years old and upwards, all with tubercle bacilli in their sputum	5 3½	7 9 13	18.0	1.0	81.0	8 8 12	54.0	1.0	45.0
100 male patients, in their 30th year and upwards, with physical signs of old pulmonary tuberculosis, but without fever and without tubercle bacilli in their sputum	5 6½	9 7 5	20.0	3.0	77.0	10 6 11	48.0	1.0	51.

consumptive patients, on admission to hospitals, when the case notes are being taken, are inclined to exaggerate their loss of weight—that is to say, there is a tendency for them to overestimate their former ordinary weight.

Our results have been classified in the accompanying table.

REFERENCES.

¹ *Medical Examination for Life Insurance*, London, second edition, 1905, p. 365. ² Loc. cit., p. 129.

ASTHMA: ITS CAUSATION AND TREATMENT.*

By WILLIAM LLOYD, F.R.C.S.Ed.,

LONDON.

AMONG the various chronic complaints to which the human frame is liable, very few can be considered of a more formidable nature than a confirmed asthma. The idea of its being an incurable disorder, its threatening instant suffocation at every attack, are circumstances altogether so alarming to a patient as necessarily to weaken and depress a mind endowed with the utmost fortitude and resignation. Any remedy, then, whether medicinal or surgical, that is capable of administering permanent relief to a person in such an afflicting situation, must be looked upon as of the utmost importance to mankind.

It may be stated that to-day a radical cure can be promised in a large percentage of cases, especially if asthma is treated in its early stages; of the remainder a number can be relieved altogether for the time, though they may be subject to subsequent attacks.

CAUSATION.

Although it would be idle to deny that the seeds of asthma are sometimes transmitted from parents to their offspring, yet too much pains have been taken by past writers to persuade the world that this is most commonly the case.

This opinion, as far as I am able to judge, was founded on the inefficacy of the remedies generally employed, rather than on the more faithful and unerring testimony of observation. Physicians supposed, as the disorder seldom or never yielded to the power of medicine, that some hidden and unconquerable cause had fixed its roots deep in the constitution, and as an apology for the healing art they have thought proper to charge this to the account of an hereditary taint. Happily, however, we know that in the large majority the case is otherwise. As an example of the hereditariness of the disease I will describe an interesting case that came under my notice in the summer of last year.

A lady consulted me in June, 1907, and brought her eldest son, who was 22 years of age, suffering from asthma. The family history is briefly as follows: Mrs. E., the mother, aged 51, married twenty-seven years ago, her husband being typically asthmatic. Two children were born of this marriage, both boys. Asthma in each case commenced at two years of age. The father died when the eldest boy was 7 and the youngest 5 years of age. Two years later the mother married again, this time not to an asthmatic. Of this marriage there are three children, the eldest being in his 16th year, perfectly free from any suspicion of asthma.

* Read before the Chelsea Division of the British Medical Association.

From this fact (if a solitary case can have any weight) it may be inferred that the predisposition is inherited.

There are numerous theories as to the causation of asthma, but, in my opinion, the only one which can be successfully maintained in the present state of our knowledge is the following: That asthma is essentially a nervous disease, and that it is due to spasm of the bronchial muscles, induced reflexly either by irritation of the nasal mucous membrane or of the alimentary canal.

To state my point clearly, take a case of asthma of nasal origin (fortunately they are the commonest), wash the patient's nose out with a mild antiseptic lotion—boracic acid, for instance—and in ninety-nine cases out of a hundred you will produce an attack of asthma, which is immediately cut short on the application of a 10 per cent. solution of cocaine to the nasal septum in the region of the anterior end of the middle turbinate. In cases of hay asthma and ipecacuanha asthma, the excitant of the paroxysm is something applied to the nasal and not the bronchial mucous membrane. Of this fact I have convinced myself by a simple experiment. Plug the nostrils, and allow the patient to inhale pollen or ipecacuanha through the mouth, and invariably he remains free from any suspicion of asthma.

It would appear, then, that there are three factors in the causation of asthma, namely:

1. The presence of hypersensitive areas in the nasal mucous membrane, or a special sensitiveness of the gastric mucous membrane.

2. A special irritability of the pulmonary nervous system, which constitutes the asthmatic idiosyncrasy with which the individual was born.

3. The presence of an irritant—for example, odours, dust, smoke, etc. Error in diet when of gastric origin.

The absence of any one of these factors is sufficient to prevent the disease.

TREATMENT.

The remedies that have been generally made use of in this disease are of great variety, such as expectorants, antispasmodics, etc.; but, like that of all paroxysmal affections, it naturally divides itself into the treatment of the paroxysm and the treatment in the intervals.

The first thing to be done on being summoned to a patient in an attack of asthma is to find out if there is any exciting cause present, and if so to remedy it. Inquire as to the time and digestibility of the last meal, and if his bowels are free and regular; if there be any source of trouble in the stomach or rectum, secure its immediate removal. If there is anything irritating in the air he is breathing, arrangements must be made for removal. If the patient is in bed, get him out and bolster him up in an arm-chair, place before him a table with a cushion on it, on which he may rest his elbows and throw himself forward.

Should the paroxysm persist in spite of these measures, then one of the following remedies must be administered in the hope of cutting it short. I have occasionally found ipecacuanha powder cut short an attack for the rest of the night. The use of pipe tobacco smoking acts admirably in some patients. It must be remembered that remedies of this kind must be given as early as possible, because

it is much easier to check the asthmatic paroxysm when it is just established.

One of the commonest and most effectual remedies is coffee. It acts better if given very hot and strong and without sugar and milk.

Alcohol, chloroform, and cocaine are remedies of the value of which I have often seen most striking instances in checking an attack however severe. One feels great unwillingness to commence these drugs; still, in face of the frightful agonies of asthma and the uselessness of every other remedy, one is perhaps justified in prescribing one or other of them when the occasion demands.

Stramonium smoking and inhalation of the fumes of burning nitre paper are remedies also extremely beneficial in some cases.

Potassium iodide is a remedy that, in the opinion of many physicians, is considered almost a specific. I regret to say that in my own experience very little permanent relief has been obtained after a long course of the drug.

It has been stated by many competent practitioners that careful dieting cures a large proportion of asthma because its victims are very often dyspeptics. The food should be nutritious and easily digestible, should be plain, well cooked, and containing the proper proportion of animal and vegetable elements. An important point to remember is that an asthmatic should dine early—5 p.m. is the latest if he goes to bed at 10—so as to allow of digestion being completed and the stomach empty before retiring to rest.

If in the nose some disease or deformity is present likely to cause asthma the condition must be rectified. Where no disease is present on inspection certain parts of the nasal mucous membrane, known as asthmogenic areas, must be cauterized, one by one, at several sittings until improvement is effected.

In prescribing a lotion for nasal cleansing I would point out that nothing acts so well as a solution of common salt in water. The various proprietary nasal compounds on the market containing boracic acid, carbolic acid, etc., are particularly irritating to the nasal mucous membrane of an asthmatic.

A CASE OF PANCREATIC DIABETES ASSOCIATED WITH DILATATION OF STOMACH FOR WHICH GASTRO-ENTEROSTOMY HAD BEEN PERFORMED.

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THE following case is of interest, as it affords an example of the class of cases recently referred to by Mr. Mayo Robson in his Mitchell Banks Memorial Lecture on the anatomy of the pancreas in relation to its diseases,¹ where the disease, in the first instance, produced a dilatation of the stomach which was relieved by gastro-enterostomy, and, in the second instance, by invasion of the pancreas, caused definite signs and symptoms of acute diabetes.

J. McD., aged 46, a lamplighter, was first seen by me in the dispensary in June, 1903, complaining of weakness in the legs, great thirst, and the passing of large quantities of water, of three months' duration, and of indigestion and constipation for nine years.

History.

The patient in his youth had measles, scarlet fever, and enteric fever. When 15 years old he had an attack of rheumatic fever, followed by another similar attack at 23; but, apart from this, he had always been strong and well until nine years ago, when his stomach began to trouble him. He commenced to lose flesh, suffer from constipation, and had difficulty in eating and sleeping. This continued for a few years until he saw Dr. Maylard in 1902, who has kindly given me a few notes of the patient's condition while under his care in the surgical wards of the Victoria Infirmary of Glasgow.

Ten months previous to his admission he had an attack of influenza, which confined him to bed for a fortnight. After this he was troubled more than ever with flatulence, sourness in the stomach, flushing of the face, loss of appetite, and bodily weakness. He had to give up work, and for six months his tongue was always foul, and he was steadily losing in weight. There was never pain in the stomach nor vomiting.

Condition in 1902.

The patient was thin, the face flushed, teeth good, tongue furred. The heart and lungs were normal.

Abdomen.—Seems normal in appearance. There is, however, marked tympanicity over the epigastrium and left hypochondriac regions, and Hippocratic succussion is present. No tenderness anywhere, and no dullness can be made out. The liver is not enlarged. The stomach was washed out and inflated. It was dilated, especially towards the left side, and extended downwards below the umbilicus.

Urine.—The urine was neutral, with specific gravity of 1024, and contained neither albumen nor sugar.

A test breakfast was ordered after washing out the stomach, and 2½ oz. of brownish fluid were drawn off. The fluid contained free HCl and amorphous semidigested fluid starch material.

Four days after admission a laparotomy was performed.

Operation.

After opening the abdomen the stomach was found to be dilated, and the pylorus appeared normal. The internal surface of it was examined digitally and by the speculum. The index finger passed easily through the pylorus without any sense of constriction. The mucous lining seemed quite healthy. A posterior gastro-jejunostomy was performed. In a few weeks the patient was dismissed from the infirmary well.

After-History.

The operation was not attended with the usual satisfactory results, and the weight, which was only 8½ st. before the operation, did not quickly increase (the patient's weight averaged 11½ st. before his stomach commenced to trouble him).

In three years his weight had increased to 10 st., and had remained stationary until December, 1907. At this date he remembers getting a chill which was followed by what his doctor called "catarrh of the stomach." Soon after, however, in January, 1908, diabetic symptoms manifested themselves.

He commenced almost suddenly to experience symptoms that he had never had before—great thirst, foul-smelling faecal evacuations, and the constant passing of large quantities of water. With this there was marked prostration and loss of weight. The bowels were constipated, the motions yellowish, sometimes sticky in character, and at other times slimy and "mattery." The tongue and mouth became dry, the skin cold, the legs swelled occasionally at the ankles, the taste in the mouth was sweetish. He noticed that the water was frothy, and had a sweet, sickly smell. The eyesight was not so good as formerly; deafness and tinnitus were troublesome. He had been troubled, too, with itchiness of the skin. He had never had jaundice, vomiting, haemoptysis, or melaena. The legs felt very tired, but he had never felt numbness or prickling sensations.

Condition in June, 1908.

The patient is very thin, with a bright expression. The mucous membranes are rather pale. The finger ends are not clubbed, nor are the nails curved. The pupils are equal, and respond to light and accommodation. The tongue is furred, but on its under surface and at the sides it is red and glazed. The throat and palate are very red. Teeth not good, but no suppurative at the stumps. Pulse regular and of moderate tension. Vessels slightly atheromatous; no oedema; no jaundice.

Lungs.—Normal in every respect.

Heart.—Normal in every respect.

Nervous System.—Pupils normal, fundus normal; no cataract, knee-jerks sluggish; no anaesthesia, no ulcers.

Abdomen.—General fullness of abdomen. Scar of operation wound seen to right of middle line. Liver and spleen normal. Kidneys not felt. No ascites. Stomach passes down below the umbilicus (auscultatory percussion). No dullness, no thickening, or tumour of the pylorus or neighbouring parts. Succussion present. Palpation of the pancreas, by throwing forward the epigastrium, is negative. Bismuth meals were given to the patient on an empty stomach, and the shadow on the photographic plates (taken by Dr. Sommerville) corroborated what was already made out on physical examination, that the stomach was dilated to a point below the umbilicus. These plates failed to show any evidence of biliary or pancreatic calculi.

Urine.—A special examination of the urine by Dr. Carstairs Douglas showed that it was very pale, feebly acid, specific gravity 1027, with scanty whitish deposit. It contained no albumen, acetone, or diacetic acid; no bile pigments or salts, pus or blood; no evidence of urobilin, although urochrome appeared to exist as a chromogen; diminished indigogens; scanty creatinin; microscopically a few flat epithelial cells, and some phosphatic crystals; urea scanty, only 4 per cent., or 1.7 grains per ounce. Sugar, 8.7 per cent., or 38 grains per ounce. A positive Cammidge's reaction, after separation of all substances that might interfere with the test.

Blood.—Haemoglobin = 60 per cent.; red cells = 4,850,000; white cells = 4,750. Films of the blood were stained in 2 per cent. methylene blue solution and 25 per cent. eosin solution—the red blood corpuscles did not take on the eosin colour sufficiently (Bremer's test); 20 c.cm. of blood, 1 c.cm. of a watery solution of methylene blue (1 to 6,000), and 40 c.cm. of liquor potassiae was mixed in a narrow test tube with 4 c.cm. of water. The mixture was placed in boiling water for four minutes. The blue colour disappeared into a dirty greenish-yellow colour (Williamson's test).

Habits.—Always abstemious. Smoked and chewed tobacco heavily until seven years ago. Never had any venereal disease.