Remarks

ON

HISTORICAL ASPECTS OF IDEAS REGARDING DROPSY.

BY

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THE appearance of dropsy or hydrops, to give it the original Greek form of the name, is a symptom which cannot fail to attract attention, although it is probable that in a primitive state of society a person affected by a malady sufficiently severe to produce this symptom would not long survive. Dropsy is mentioned in the Ebers papyrus and on the clay tablets of medical prescriptions from ancient Assyria, with the treatment, material and magical, believed to be appropriate to the condition.

Hippocrates (400 B.C.) naturally has a good deal to say on dropsy, and he divides it into the three types of hydrops, anasarca, and tympanites. The first of these was a collection of fluid in the abdomen; by the second term he meant a collection of fluid dispersed generally through the flesh; while in the third there was an associated condition of flatulence.

In accordance with the general idea of disturbance in the humours as the cause of disease, he attributed dropsy, so far as he professed to theorize regarding the disease, to a malady of the spleen, in consequence of which the tissues liquefy and the belly and lower parts become full of water.¹ In other cases the formation of liquid was attributed to the liver, in others to the production of white phlegm, and in still others to dysentery.²

Although this process of liquefaction of the tissues is regarded by Hippocrates as the essence of dropsy, he evidently distinguishes dropsies which, from their clinical aspect, are of different nature and of very different importance in their influence upon health and life. Dropsy in the legs, when it is combined with cough (by which apparently he means to indicate the filling up of the chest with fluid) he pronounces to be bad.³ He recognizes that anasarca, beginning in the course of an acute illness with urine coming in small quantities and having little sediment, is of a bad type. The dropsy which is succeeded by epileptic attacks (and by this he evidently indicates uraemia) is also very serious. Dropsy accompanied by colic is bad; when it is associated with diarrhoea (and here he is perhaps thinking of tuberculous peritonitis with enteritis) it is fatal; while dropsy which yields to treatment for a time and then recurs is to be regarded by the physician as hopeless.⁴

In respect of treatment Hippocrates recommends that the flesh which has broken down and liquefied should be removed by laxatives, or the belly may be opened near the umbilicus and the fluid let out.⁵ As a purgative he recommends veratrum in vinegar.⁶

It is evident that the Father of Medicine does not profess to draw a clear distinction between different kinds and varying causes of dropsy, although he clearly indicates some of the conditions in which dropsy is a serious feature of illness.

At the Alexandrian School of Medicine Erasistratus attributed dropsies to sluggishness and hardness of the liver—what he called scirrhus, and we should designate cirrhosis.⁷

Galen, five centuries after Hippocrates, had a good deal more to say in detail in regard to dropsy, although he repeated most of what Hippocrates had pronounced. It is interesting to note that Galen, who wrote voluminously on the pulse, described the pulse of auricular fibrillation in anasarca as being small, rapid, irregular, and soft.⁸ Galen, however, failed to recognize weakness of the heart as the important causal factor in dropsy; in fact, he completely inverted the matter, and described the softness of the pulse and weakness of the heart as due to the softening of the heart and arteries caused by the dropsical fluid.⁹

He held that dropsies should first be treated by purgatives and at a later stage by the addition of remedies which drew off the humours from their place of formation, such as drugs which produced vomiting, provoked urine, etc. By blood-letting also he declared that he had in some cases brought about cure of the dropsy. He was a great believer in various local applications which had the power of absorbing the fluid through the skin. Among these he mentioned with favour a paste, introduced by Asclepiades and consisting chiefly of cornflour, manna, and lard, which was smeared over the dropsical parts; also Egyptian earth and various forms of plasters. For the surgical cure he recommended that the abdomen should be punctured a little under the umbilicus towards the left with a knife shaped like a myrtle (leaf).¹⁰

As Galen had left the matter, so it virtually remained all through the Middle Ages, dropsy being regarded as a primary disease, like epilepsy or fever, of which the cause was practically undiscoverable. It continued to be regarded as in some way connected with disorder of the liver or the spleen, but there was no clear connexion between the two sets of phenomena. So matters remained right up to the seventeenth century.

I may be pardoned here, in this year of the tercentenary of Harvey's discovery, for making a short digression to the new idea regarding the functions of the body in health and disease which followed as a corollary to his principle of the circulation. Galen perfectly understood the function of the valves of the heart, and is at considerable trouble to describe them.¹¹ He and his followers, however, imagined apparently a leisurely ebb and flow of humours, and had no conception of the whirling rush which proceeds constantly like a mill-race through all the tissues of the body. When the vigour with which this process goes on is grasped it is easy to understand at the present day that any interference with it will naturally cause a stagnation of the fluid. The wonder is that nearly two centuries elapsed after Harvey's publication of the *De Motu Cordis* before the idea was generally accepted that failing power on the part of the heart was one of the main causes of dropsy. Malpighi and Leeuwenhoek, towards the end of the seventeenth century, demonstrated with their newly invented microscopes how the tissues were everywhere penetrated by minute vessels through which the blood corpuscles, floating in a fluid, passed in single file. Borelli and Pitcairne, about the same time, worked out with mathematical precision the hydrodynamics of this remote part of the circulation in a state of health, but there was as yet no attempt to apply the principle to the processes of disease.

A contemporary of Harvey, Theophilus Bonetus of Geneva, was the first person to issue a textbook of morbid anatomy. This, which was called the *Sepulchretum* and published in 1679, is a storehouse of all that was then known in regard to the anatomy of disease. He records numerous cases of dropsy, and mentions in one that the heart was of a great size, in another that a hardening was found in the heart, in a third that the right ventricle contained a pituitous substance like the yolk of egg, etc., but he does not anywhere connect these appearances with the cause of the dropsy.¹²

A century later Morgagni's great work *On the Seats and Causes of Disease* carried the matter a little further. In regard to the cause of dropsy his pronouncement¹³ was:

"That by the force of hypothesis, rather than by the authority of Hippocrates, or the dissection of dropsical bodies, most physicians were formerly induc'd to believe the liver first, and after that the spleen, to be the cause of dropsy, you will learn from the *Sepulchretum*; either in the place where it is shown, that in the books of Hippocrates, not any one, or two, viscera are suppos'd to be in fault, but many, or where many examinations of the viscera of dropsical bodies being produc'd, both of these viscera are, demonstratively, clear'd from the charge. And, certainly, whatever part, or whatever cause, can, for a considerable time, retard the motion of the blood, or lymph, or immediately increase the secretion of the moisture, with which all the cavities of the body are furnish'd; or, in short, prevent, or diminish, by any means, its absorption, may give origin to this disorder."

Morgagni is generally credited with having been the first person to describe disease of the mitral valve, and he cites numerous cases in which either this valve or the aortic valve was thickened, hardened, nodular, or even

* The opening paper in a discussion in the Section of History of Medicine at the Annual Meeting of the British Medical Association, Cardiff, 1928.

ossified. In several of his cases he demonstrates the co-existence of this and a collection of fluid in the pleural cavities,¹⁴ but he does not anywhere clearly specify the valvular defect as the mechanical cause of the dropsy.

Matthew Baillie appears to have been one of the first persons to be impressed by the important influence that must be exerted by a valvular defect of the heart on the general functions of the body. In notes on the illustrations in his atlas (1799), which show thickening and ossification of the heart valves, he remarks that it is obvious that such valves must perform their office very imperfectly.¹⁵

Meantime, the subject of dropsy was being approached from another point of view, that of clinical medicine and therapeutics, and it gradually became clear that, as regarded treatment, dropsy must be considered as a disease which in different cases is of diverse natures and due to varying causes.

In the year 1775 William Withering, M.D., physician to the General Hospital at Birmingham, was shown a family receipt for the cure of the dropsy which had been used for long by an old woman in Shropshire, and had sometimes made cures of this condition after the more regular practitioners had failed. The prescription contained some twenty herbs, but it was obvious that the active ingredient was foxglove. Withering accordingly, in the summer of 1776, obtained a quantity of dried foxglove leaves with which he commenced to experiment upon patients attending the dispensary at Birmingham, using first of all a decoction, then an infusion, and, later, occasionally the powdered leaves themselves. He used digitalis especially for a number of dropsical cases which presented themselves in 1779, following upon an epidemic of scarlet fever and sore throat, which had raged generally at Birmingham in the preceding year. As he had obtained good results with it, the use of the drug was communicated to the Medical Society at Edinburgh in February, 1779, and digitalis appeared in the new edition of the *Edinburgh Pharmacopoeia* in 1783 on the recommendation of Dr. Hope. Withering himself did not publish his results until 1785, by which time he had collected over 160 cases of dropsy, in some of which the use of digitalis had been attended with remarkable benefit, while others had shown no improvement whatever.¹⁶

The cases of dropsy in which he found digitalis effective as a cure were those in which the pulse was feeble or intermitting, the countenance pale, the lips livid, the skin cold, the swollen belly soft and fluctuating, and the anasarcaous limbs readily pitting under the pressure of the fingers. These were obviously cases in which the dropsy had followed mitral disease. There was, indeed, at the time when he wrote, no means available for making a correct diagnosis of this condition. He concluded that, though digitalis would not act universally as a diuretic, it did so more generally than any other medicine. He also observed that it had a "power over the motion of the heart, to a degree yet unobserved in any other medicine, and that this power may be converted to salutary ends." He did not, however, draw any closer connexion between the dropsy and the heart disease. He excluded from the beneficial action of digitalis ovarian dropsy and hydrocephalus or dropsy of the brain.

An important monograph upon dropsy of the ventricles of the brain appeared in the year 1768 from the pen of Robert Whytt, professor of medicine in the University of Edinburgh. This treatise was the first description of tuberculous meningitis, and gave an almost perfect clinical description of the condition as we now know it, although of course Whytt could not trace its cause to the tubercle bacillus. He showed that it was due to some compression of the absorbent veins, while the normal amount of secretion of fluid went on from the small arteries.¹⁷

Dropsy of renal origin was not recognized for another fifty years, but meantime fresh light was being thrown upon the development of dropsy by investigations into the function of the lymphatic vessels.

As early as 1622 Aselli, professor of anatomy at Pavia, had discovered the lacteals and their valves. By 1651 Pecquet had noted the existence of the receptacle of the chyle and its continuation as the thoracic duct, and in 1652 Jolive, an Englishman, in taking his doctor's degree

at Cambridge, presented in his thesis an account of the lymphatics, a matter which was more fully described in the *Nova Exercitatio Anatomica* of Olaf Rudbeck, professor of anatomy at Upsala, in 1652. Rudbeck described, under the name of *vasa serosa* or *aguosa*, the vessels containing a clear watery liquid, which we now call lymphatics. A whole century passed, however, before people began to inquire seriously into the functions of these minute vessels. Priority in elucidating the nature of these vessels was claimed both by William Hunter and by Alexander Monro (secundus) of Edinburgh, and formed one of the celebrated medical controversies of the eighteenth century. Up to 1755 everyone supposed that the lymphatic vessels were simply a class of very minute veins which originated, like the red veins, from the arteries. Monro and Hunter suggested that the lymphatics were the absorbents of the body, and Monro, in 1757, published a thesis, *De Venis Lymphaticis Valvulosis*, in which he dealt with their origin from spaces in the connective tissues, a subject which he traced by a method of injection. Hewson, in 1774, published his celebrated *Description of the Lymphatic System in the Human Subject and in Other Animals*. After this time the absorption of fluid from the tissues by the lymphatics was fully established. This matter of scientific knowledge practically coincided with Withering's experiments on the use of digitalis in removing dropsy and with Morgagni's statement that dropsy was due to any cause that retarded the lymph or prevented the absorption of moisture from the cavities of the body.

The next step in clearing up the question of dropsy was the recognition of a cardiac type of this disease. Morgagni and other observers had already, about the middle of the eighteenth century, recorded numerous cases of dropsy in which, as an incident, abnormality of various heart valves or of the structure and size of the heart had been found, but they had not traced a connexion between the two sets of phenomena. The earliest case that I have been able to find in which suggestion is made of a definite causal connexion is recorded by Dr. Donald Monro, and is worth while quoting. He says:

"In the year 1750 I dissected the body of a man who died of an universal dropsy, in the presence of Dr. John Rutherford, professor of medicine in the university of Edinburgh: we could find no other cause of the disease than the ossification of the *valvulae mitrales* in the left ventricle of the heart, by which the orifice of that ventricle was so strained, that I could scarce force my little finger into it. The heart itself was very large. While the man was alive, all the soft parts of the neck were raised by every systole of the heart, in such a manner that the veins there seemed to have a pulsation."¹⁸

Monro, however, did not press this point of narrowing at the mitral valve as being a common cause of obstruction to the circulation and consequently of dropsy. No doubt other cases were from time to time recorded in medical literature, but the first standard publication in which cardiac dropsy was definitely recognized seems to have been Corvisart's *Essai sur les maladies et les lésions organiques du cœur et des gros vaisseaux*, first published in 1806. He refers to the opinions of Bichat and others, so that the idea of cardiac dropsy may be said to have taken root with the beginning of the nineteenth century. Corvisart describes the case of a blacksmith, aged 20 years, who complained of dysentery and haemorrhage from the bowels, accompanied by palpitation of the heart and general oedema of the body. From the strong, quick, and irregular intermissions of the pulse, Corvisart diagnosed at one of his clinical conferences "an organic lesion of the heart."¹⁹ The patient having died twenty-five days after admission to hospital, the *post-mortem* examination revealed dilatation of the left auricle and contraction of its opening into the left ventricle to "a kind of osseous slit through which a thin coin could scarcely have passed."¹⁹ Corvisart therefore contended that the dropsy, haemorrhage, and other symptoms had all been due to the narrowing of the mitral valve and not to dysentery, to which, on the old view, the whole of the symptoms had originally been attributed. Since Corvisart's book had a wide circulation and great reputation, this may be regarded as definitely establishing cardiac disease in the position of a cause of dropsy instead of the dysentery, disease of the liver and spleen, etc., which had previously been considered the essential origin.

It is important to note in passing that the method of diagnosing by percussion collections of fluid in the abdomen and in the pleural cavities had been first invented by Auenbrugger and announced in his *Inventum Novum*, published at Vienna in 1763. This practically coincided with the publication of Morgagni's great treatise. It was, however, for long completely disregarded, and became generally known only after a French translation had been published²⁰ by Corvisart in 1808. Thus we may conclude that in most cases with only a moderate amount of ascites or hydrothorax the presence of the dropsy was missed during life until the beginning of the nineteenth century, when diagnostic methods became more precise.

A few years later we find the whole subject of the diagnosis of small collections of fluid in the pleural cavities and abdomen and the recognition of cardiac valvular disease during life placed on a firm basis by Laennec. This writer, in his *De l'Auscultation Médiate*, describes how, in the year 1816, he discovered by chance that he could hear the heart sounds more clearly through a rolled-up exercise book than when he applied his ear directly to the chest. This was the beginning of the stethoscope. Moreover, Laennec's careful observations on the sounds made by the normal and diseased heart, compared with the observations which he made on the same patients after death, laid a sure foundation for the diagnosis of organic heart diseases and their complications.²¹ He described clearly, for example, a bruit "analogue à celui d'un soufflet" which corresponded to the contraction of the left auricle in a case that presented dropsy of the hands and legs, hydrothorax and ascites, and in which the cause was found after death to be a state of warty vegetations on the mitral valve with rupture of one of its tendons and dilatation of the two ventricles. He gave also vivid pictures of other cases in which cartilaginous changes and narrowing of this valve had been the cause of dropsy.²² Laennec's work may be regarded as the statement of our present-day knowledge regarding cardiac valvular disease as the mechanical cause of one form of dropsy.

A new chapter in the history of dropsy was gradually opening while the elucidation of cardiac dropsy was still obscure. William Charles Wells seems to have been one of the first to call attention to another type of dropsical cases in a paper "On the presence of the red matter and serum of blood in the urine of dropsy which has not originated from scarlet fever." The fact that dropsy accompanied scarlet fever and other acute disease, and often led to the patient's death had, of course, long been recognized. Wells, in 1811, drew attention to the fact that dropsy sometimes came on gradually, with a scanty secretion of urine, sickness, and other disorders of the digestion, bad-smelling breath, and convulsions. For years after these patients recovered, the urine, although clear, was found to contain blood serum because "being boiled it became turbid, and afterwards deposited a considerable quantity of curdy matter." "Nitrous acid" was also used as a test by Wells. Wells mentioned twenty-nine cases of dropsy of the skin not preceded by any disease to which dropsy was generally attributed, among which the urine of twenty-three gave this test. As, however, he did not bring any of the cases to *post-mortem* examination, the cause of the dropsy still remained in doubt.²³

The subject was pursued further very shortly afterwards by John Blackall, physician to the Devon and Exeter Hospital, who published a manual upon *The Nature and Cure of Dropsies*. Blackall divides dropsy primarily into that form in which the urine is coagulable by heat and that in which it is not coagulable. Despite the work of Corvisart, however, he does not recognize the mechanical effect of cardiac disease as an essentially important cause. He refers to observations by previous persons, such as Cotunnus, who had described a "mucilaginous diabetes connected with the beginning of some dropsies," Latham, who in 1795 had described "diabetes with a copious discharge of serum from the kidneys," and others. Blackall's work deals largely with the matter of treatment and the clinical indications for the use of different remedies, such as squills, oil of turpentine, cantharides, copper sulphate, potassium citrate, tobacco, digitalis,

infusion of broom tops, tincture of opium, tapping, and scarification.

It is not till we come to the classic work of Richard Bright, of which the centenary was celebrated last year, that a precise account is presented to us of disease in the kidneys as a cause of one type of dropsy.²⁴ Bright made a careful and complete study, both clinical and pathological, of his cases, and published admirable plates showing the actual changes in the kidneys of the dropsical patients. Laennec had published in 1826 the second edition of his great work, and the connexion of heart disease with dropsy was firmly established. Bright had made a three years' study of dropsy in the wards at Guy's Hospital, and he says:

"Where anasarca has come from exposure to cold, or from some accidental excess, I have in general found the urine to be coagulable by heat. . . . During some part of the progress of these cases of anasarca, I have in almost all instances found a great tendency to throw off the red particles of the blood by the kidneys, betrayed by various degrees of haematuria, from the simple dingy colour of the urine, which is usually recognized; or the slight brown deposit;—to the completely bloody urine, when the whole appears to be little but blood, and when not unfrequently a thick ropy deposit is found in the bottom of the vessel."

He describes other chronic cases as follows:

"In persons long the subjects of anasarca recurring again and again, worn out and cachectic in their whole frame and appearance, and usually persons addicted to an irregular life and to the use of spirituous liquors. . . . In all the cases in which I have observed the albuminous urine it has appeared to me that the kidney has itself acted a more important part, and has been more deranged both functionally and organically than has generally been imagined. In the latter class of cases I have always found the kidney disorganized. In the former when very recent I have found the kidneys gorged with blood. And in mixed cases where the attack was recent, although apparently the foundation has been laid for it in a course of intemperance, I have found the kidney likewise disorganized."

The matter was subsequently verified in 1829 by Christison, who reported several instances of albuminuria with renal disease and who mentioned the progressive diminution of the urea in the urine and the increase of the urea in the blood.²⁵ Bright recurs to the subject in the second volume of reports of medical cases, published in 1831, where he deals with dropsy as it affects the brain both in cases of kidney disease and those due to various local causes. The importance of kidney disease as a cause of epileptiform convulsions, paralysis, and other signs of dropsy interfering with the nervous system was fully described by Bright, and has, perhaps, come to receive too little attention in recent times.²⁶

Still another chapter, clearing up what had been regarded by earlier physicians as a puzzling group of dropsical cases, commenced with the description by Sir William Gull in 1873 of two cases showing a cretinoid state supervening in adult life in women. He gave a clear clinical picture of two elderly women who had come under his observation because of increasing languor and the development of a gradual appearance of dropsy. He described the complexion as having been:

"Entirely different to what one sees in the bloated face of renal anasarca. This suspicion of renal disease failing, anyone who should see the case for the first time might suppose that the heart was the faulty organ and that this general change in the features and increase of bulk were owing to venous congestion. But neither would this be confirmed by an exact enquiry into the cardiac condition."

He had at that time no explanation to give of the cause that led to this state. With regard to treatment all he could say was:

"The best suggestions I can make are to let events take their course very much, maintaining the strength by simple regimen and fresh air, and by the occasional or more or less continuous use of such remedies as quicken the peripheral venous circulation. Hot-air bath, or warm bath, frictions, etc., but the general good effect will, I think, be limited."²⁷

Four years later William M. Ord, physician at St. Thomas's Hospital, went further and described in detail five cases of this condition which he carried to autopsy and showed to be associated with atrophy of the thyroid gland. He found that the skin, when cut up into small fragments, retained its oedematous condition, whereas the skin of dropsical patients collapsed when treated in this way; and he further found that fifty times the normal quantity of

mucin could be extracted from the subcutaneous tissues of these persons. He therefore gave the name of "myxoedema" to supposedly dropsical cases of this type.²⁸ The separation of these cases, which formerly had been classed as a type of dropsy, was further made in 1883 by Kocher, who found that the condition developed after removal of the thyroid gland,²⁹ and by Semon,³⁰ who in the same year suggested the identity of cretinism, myxoedema, and cachexia strumipriva, and whose suggestions on identity of origin were confirmed through an investigation held by the Clinical Society of London in the following year.³¹

In contrast to the helplessness expressed by Gull in 1873 for the betterment of these cases, Murray³² in 1891 used with good result hypodermic injections of glycerin extract of sheep's glands; and, in 1892, the treatment was further improved and simplified by Hector Mackenzie and Fox,³³ who independently and successfully used the administration of sheep's thyroid gland, or its extract, by the mouth in the treatment of myxoedema.

Other forms of dropsy of a localized nature have from time to time been shown to be due to conditions which offer a local obstruction to the circulation of blood or lymph. It is unnecessary to particularize these, but one may simply mention the discovery by Bancroft in 1876 of the filaria which causes elephantiasis and allied conditions that were for long a puzzle to physicians practising in tropical regions.

SUMMARY.

Dropsy from the earliest times was an obvious morbid condition, and was for long regarded as a disease *sui generis*, due to liquefaction of the tissues. The ancient Greek physicians attributed it chiefly to a disorder of the liver, and hardening of this organ was regarded as the principal cause by the Alexandrian School of Medicine. Galen regarded the defective action of the heart, which is often an accompaniment of dropsy, as an effect rather than a cause. In the eighteenth century Morgagni drew attention to the frequency with which the heart is found to show valvular defects and other disorders in cases of dropsy, but he did not carry the matter further. Withering, who introduced the use of digitalis in 1775, recognized that only certain cases of dropsy were amenable to treatment by this drug. He described as the type of case in which the dropsy was chiefly benefited persons showing symptoms which we can now recognize as being those of advanced cardiac disease, although the means of diagnosing valvular disorder was not at the time available to him. In the beginning of the nineteenth century Corvisart, followed by Laennec, placed the diagnosis of cardiac disease on a sure foundation and showed that dropsy was frequently simply a sequel of this type of disease. The recognition of kidney disease as a cause of dropsy was first made early in the nineteenth century when Wells, Blackall, and others pointed out the fact that the presence of albumin in the urine was a prominent feature in certain dropsical cases, and these observations were placed on a sure footing by Bright in 1827. A further group of cases in which neither the heart nor the kidney is found to be at fault was demonstrated by Gull and Ord, in the seventies of last century, to be due to atrophy of the thyroid gland and to be of a different nature from simple watery oedema.

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DISEASES OF THE CORONARY ARTERIES.*

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THE maintenance of an efficient circulation to the heart muscle is of fundamental importance if the heart is to be able to perform its function in health or disease to the best advantage. One of the essential requirements for this purpose is the possession of healthy coronary arteries, and it is to a consideration of diseases of these vessels that I have been asked to direct your attention.

Before embarking on the subject proper it might not be inappropriate to indicate the scope of the discussion in relation to the title. Although diseases that affect the coronary arteries are the same as those that affect arteries in general, discussion of minute points in classification or of pathological details would be unfortunate and probably profitless. One should concentrate rather on the effects produced on the heart by such diseases as receive general acceptance. Again, because of the widely recognized connexion between angina pectoris and these diseases, one must guard against any concentration on the theories of angina pectoris, interesting though that might be in itself, as a detraction from the value of the main subject before us.

Further, coronary artery thrombosis is an important manifestation which has attracted much attention in recent years and will no doubt be freely discussed to-day, but it would denote a narrow outlook if discussion became limited to this condition. There is a danger in any of these directions of overlooking other important considerations.

In so far as special aspects of the subject will be dealt with in detail by subsequent speakers, these opening remarks will best serve their purpose if I survey in a general way some of the essential features of the problem.

HISTOLOGICAL.

Disease of the coronary arteries has been recognized for a considerable time, and its association with angina pectoris as more than a coincidence has been widely accepted, though many have refused to accept the view that coronary disease offers a complete explanation of that condition. Prominent among the latter have been Allbutt,¹ Mackenzie,² Cabot,³ and Vaquez.¹⁶ In recent years, fifteen to twenty at most, prominence has been given to certain symptoms, anginoid in nature, which have been found to be associated with coronary blockage—usually by thrombosis *in situ*. The importance of this syndrome, to which further reference will be made, is undoubted, and has anew directed attention to these vessels. Inquiries into the literature have been made by Hamman,⁵ and more recently by Parkinson and Bedford,¹⁰ and while it would appear that the association of special symptoms with occlusion of the coronary blood supply had been recognized as far back as 1878, it is only during the last few years that it has received intensive study and that a clear distinction has been established between it and the more widely recognized syndrome of typical angina pectoris.

In this country the papers published in 1925 by McNee⁸ and by Gibson³ have helped to focus attention on this subject. It is interesting to note, however, that in 1887

* A paper read in opening a discussion in the Section of Medicine of the Annual Meeting of the British Medical Association, Cardiff, 1928.