



HARWOOD HULL—Photograph.

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ASHFORD'S BIBLIOGRAPHY OF SPRUE

Edited with additions *

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During a recent visit to Puerto Rico the voluminous manuscripts, notes and correspondence upon the subject Sprue, left by the late Col. Bailey K. Ashford, were kindly placed at my disposal.

Preface Ashford was a man of remarkable diligence and scientific enthusiasm who devoted many years of his busy life to the study of sprue. In his correspondence he states frequently that his ambition is to produce a monograph on this disease which would be complete and definite. Several chapters of this work had been completed at the time of his death. It is probably an inevitable commentary on such ambitions that, despite his indefatigable labors, Ashford was not equipped to say the final word on the natural history of sprue. His belief that in the *Monilia psilosis* Ashford, he had discovered the etiologic agent, has been proved incorrect, and the work of other investigators has shown that

Durante una reciente visita a Puerto Rico, el Dr. George W. Bachman, Director de la Escuela

Prefacio de Medicina Tropi-
Extracto en cal, tuvo la bondad
español de mostrarme un vo-
luminoso manuscrito contenien-
do las notas y correspondencia
referentes al esprú que habían
sido recopiladas por el Coronel
del Cuerpo Médico del Ejército
de los Estados Unidos, Doctor
Bailey K. Ashford.

Ashford era un hombre que poseía una notable capacidad de trabajo, y además un gran entusiasmo científico. Frecuentemente había dicho que trataba de escribir una extensa monografía sobre el esprú. Sin embargo, a pesar de los esfuerzos realizados, no pudo llevar a término su empresa y la recopilación que emprendió no agota el tema. Su opinión sobre la *Monilia psilosis* como agente etiológico de la enfermedad no es exacta, según han podido demostrar otros investigadores que consideran el esprú como un estado de deficiencia nutricional que puede ser corregido con medidas terapéuticas apropiadas.

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sprue is a deficiency state quite amenable to replacement therapy.

This in no way lessens the honor due the pioneer work of Ashford in this and other diseases and one notes with pleasure the presence of a fine bronze bust of him in the foyer of the School of Tropical Medicine in San Juan. Pleasure, however, is mixed with astonishment when the visitor from the United States finds that the street in which he lived has been renamed "Avenue Dr. Ashford". Such evidences of public esteem are usually reserved for warriors and gentlemen euphemistically referred to as "statesmen". And so it comes that our public places are copiously adorned with statues of fat generals cast in incredible equestrian attitudes, or solemn fellows in frock coats or Roman togas, their right hands reposing upon hearts which seldom struck an unselfish beat. With rare exceptions, the true benefactors of mankind are not the objects of public gratitude.

Among the papers of Colonel Ashford, I found a bibliography of sprue which was copious and exhaustive. Accompanying a great many of the references are paragraphs of critical comment, so that the whole bears the aspect of a bibliography raisonné. It seemed me that so much intelligent effort should not be wasted, and that the completion of Ashford's bibliography of sprue would serve a useful

Esto, no obstante, en nada afecta la labor realizada por el Doctor Ashford, al que le cabe el honor de haber sido un pionero en la labor de investigación sobre este y otros estados patológicos, ni disminuye en un ápice el mérito de su inteligencia que aplicó toda su energía en todas direcciones durante su vida de investigador científico.

Parécenos, tanto al Dr. Bachman como a mí, que la copiosa y exhaustiva recopilación bibliográfica realizada por el Dr. Ashford puede ser de gran utilidad a los que se dediquen a esta clase de investigaciones y por esta razón hemos decidido publicarla íntegra. Hubiera querido llevar a cabo personalmente la revisión del trabajo, pero gracias a la cordial cooperación del señor William R. Maddox mi labor ha sido considerablemente aliviada.

Hemos omitido en esta edición los comentarios al margen puestos por el Dr. Ashford, pero no creemos que haya quedado fuera nada que no tenga positivo valor.

scientific purpose. I therefore undertook to see the task completed. My own part in the work has been slight. I was fortunate to have available the services of Mr. William R. Maddox, a man trained in bibliographic research, possessing enthusiasm for the task, and the time which a somewhat harrassed Professor of Medicine lacks. Ashford's comments have been omitted, but it is hoped that nothing else of value has been.

Sprue is an interesting disease with a long and varied history. One thoroughly familiar with the clinical picture of the sprue syndrome will not doubt that the following description by Aretaeus, of Cappadocia, who practiced in Rome during the reign of Nero (Second Century A. D.) is based on the observation of patients ill with sprue.

"The stomach being the digestive organ, labours in digestion when diarrhea seizes the patient. Diarrhea consists in the discharge of undigested food in a fluid state; and if this does not proceed from a slight cause of only one or two days' duration; and if, in addition, the patient's general system be debilitated by atrophy of the body, the Coeliæ disease of a chronic nature is formed, the heat does not digest it (the food), nor convert it into its proper chyme, but leaves its work half finished, from inability to complete it; the food being deprived of this operation, is changed to a state which is bad in colour, smell and consistence. For its colour is white and without bile; it has an offensive smell, and is flatulent; it is liquid, and wants consistence from not being completely elaborated, and from no part of the digestive process having been properly done except the commencement.

"Wherefore they have flatulence of the stomach, continued eructations, of a bad smell; but if these pass downwards, the bowels rumble, evacuations are flatulent, thick, fluid or clayey, along with the phantasy, as if a fluid were passing through them; heavy pain of the stomach now and then, as if from a puncture; the patient emaciated and atrophied, pale, feeble, incapable of performing any of his accustomed works. But if he attempts to walk, the limbs fail; the veins in the temples are prominent, for owing to wasting, the temples are hollow; but also over all the body the veins are enlarged, for not only does the disease not digest properly, but it does not even distribute that portion in which the digestion had commenced for the support of the body; it appears to me, therefore, to be an affection, not only of the digestion, but also of the distribution."

This quaintly phrased description was sent to Dr. A. M. Snell of the Mayo Clinic, who has studied intensively ten or more cases of indigenous sprue. His comment was that Aretaeus' description might very well be used for the last case of sprue which he had studied.

Vincent Katelaer, in a treatise published in 1669, entitled *De Aphthis Nostratibus, seu Belgarum Sprouw*, first

applied the term "Sprouw" to aphthous stomatitis among the Belgians, which was accompanied by feces so voluminous that "several basins or pots scarcely hold these accumulations". As a description of sprue, Katelaer's observations can hardly be regarded as important, and William Hillary (1776) is rightfully credited with the first clinical description of the disease. His observations were made during a six-year residence in the Barbadoes, from 1752 to 1759, and give a very clear account of the natural history of the sprue syndrome. Although he recognized the clinical picture as new and "never described by any author, neither ancient or modern" he showed a refreshing lack of dogmatism in suggesting a name for the condition. Writes Hillary:

"As it is a new disease, we must give it some name; Shall we call it an Aphthoides Chronica, or an Impetigo Primarium Varum? Or what? But I will not dispute with anyone about its Name, as that is only a difference between Words; and if anyone will give it a better Name I will readily agree with him and thank him also."

About 112 years after Hillary announced his discovery of a new gastro-intestinal disease, Sir Patrick Manson, in China, and Van der Burgh, in Java, published their descriptions of sprue. Each of these observers was familiar with the work of the other, and credit for the clear, modern concepts of the disease belong to them equally. Van der Burgh's article is classical. It was the result of his thirty years' experience, based upon the study of 1407 cases of sprue. Manson's clinical experience was not so extensive, but his descriptions and suggestions as to the etiology of the disease have been abundantly sustained by subsequent observers. He clearly recognized that "bad or insufficient food" was of major importance in etiology.

The acquisition by France of Cochin-China and the influx of Frenchmen both military and civilian, that followed, soon presented to the medical men the problem of dysenteries and diarrheas of various causations. Many excellent descriptions of sprue were published, and the disease was called Cochin-China diarrhea. This was unfortunate, for endless discussions resulted as to its proper classification. Frenchmen in France, with little or no experience of the syndrome, exercised the well-known French clarity of reasoning in proving that Cochin-China diarrhea was just another instance of

infectious dysentery. The absence of characteristic pathological lesions, noted so frequently by all students of sprue, disinclined them towards its acceptance as an entity. Hence, in spite of the splendid clinical observations of the naval surgeons resident in Cochin-China, French literature did very little to spread a knowledge of sprue throughout the scientific world.

It has been the fate of all deficiency states or diseases to pass through a stage in which they were almost universally regarded as the result of some hypothetical infectious agent. One need only recall beri-beri, pernicious anemia and pellagra as instances of this very natural error. Anything resembling exact knowledge of deficiency diseases is the result of work done within the last three decades. Before this time the powerful impression which bacteriology had made largely dominated medical thought. The fruitful conception of deficiency states hardly had been born. Sprue, now recognized as due to a deficiency of certain products of normal protein digestion, has also passed through an "infectious" period. Kohlbrugge, in 1901, first called attention to the fact that a yeast-like fungus, now known as *Monilia psilosis*, is a common organism in the stools of sprue patients. He rather tentatively suggested this organism as an etiological factor. This suggestion was followed by many other observers, notably Castellani and Ashford, who attempted to prove that moniliosis was a determining factor in the causation of the disease. Ashford was an especially vehement protagonist for this conception, and his writings greatly impressed American medical opinion.

Elders first stated in definite, unequivocal fashion the modern concept of a deficiency state as the primary cause of sprue. He summarily discarded all infectious agencies in the production of the disease.

The one greatest contribution to a clearer conception of the etiology of sprue was the epochal discovery by Minot and Murphy in 1926 that liver is capable of replacing the deficiency underlying pernicious anemia. The resemblance of the blood picture of sprue to that of pernicious anemia induced Bloomfield and Wycoff, in 1927, to treat sprue with liver. Their results were brilliant and have been confirmed by many other observers. Now it may be said with confidence that every symptom of sprue can be cured by liver

therapy, though some will require maintenance doses of liver and all must correct the underlying dietary deficiency, if relapses are to be avoided. The last link in the chain of evidence has been supplied by Miller and Rhoads, who produced in hogs, by feeding a deficient diet, a state closely resembling sprue in every way.

Among numerous monographs on sprue two deserve special mention. Carnegie Brown's review (1908) brought the available knowledge into most readable form, though today one feels that a disproportionate part of the work is devoted to dietary therapy. Hess Thaysen's monograph (1932) presents the modern view of the sprue syndrome, and is an excellent example of the results to be obtained by the intensive study of relatively few cases. The complete natural history of sprue, however, has not as yet been written! This will only be possible when the intensive treatment of sprue by liver therapy has been adopted widely and the results recorded. Until this is done prognosis must remain uncertain, though it is probable that most instances of sprue can be permanently cured.

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