the pancreatic juice by the too acid contents of the stomach being passed into the intestine causes fat to be stored up. Diabetes mellitus we find alternating with obesity and following osteomalacia when the latter has received the benefit of improved hygiene or increased oxidation. In diabetes insipidus probably the nervous system is first affected by retention of uric acid, since we have the disease following lead and alcohol poisoning and sudden refrigeration of the body, which things Haig has shown favor the precipitation of uric acid by raising the acidity of the blood. Dilatation of the capillaries of the kidneys may be the immediate result of mechanic obstruction in the form of the precipitated uric acid in the arterioles.

In biliary lithiasis the cholesterin becomes precipitated from the bile, when the calcium salts unite with the organic acids to form insoluble salts. Renal calculi result directly from the acids, uric acid being the most frequent form. Pancreatic calculi are dependent upon the precipitation of the calcium salts from an acid medium.

Rheumatoid arthritis, according to Haig, is one stage of the same condition known as gout. He reported a postmortem at St. Bartholomew's Hospital in which Sir Dyce Duckworth observed rheumatoid changes, that is erosions without urates, and gouty changes or erosions with a deposit of urates in the joints, in the same cadaver. In the rheumatoid joint the urates had been dissolved out and eliminated in the urine prior to death. Rheumatism, gout and valvular disease of the heart are produced by the deposit of the urates in the tissues, which is caused by increased acidity of the blood. Asthma, cephalalgia, epilepsy, arterio-capillary fibrosis and all the other conditions are dependent upon uric-acidemia, which increases arterial tension and affects the interstitial circulation of the various organs and tissues.

In speaking of these diseases as dependent upon arthritis, it is not meant that no other causative factor exists, or that these diseases may not be acquired, but that the essential condition corresponds to the "arthritic diathesis." Bouchard says: "The reaction of a disturbed nervous system, by corrupting for the moment nutrition, can produce morbid opportunity, and may modify nutrition in a lasting manner and develop an acquired diathesis. The acquired diathesis, once established, may become transmissible." Horbaczewski has shown uric acid may be derived from nuclein. Haig believes a proportional amount of urea is also derived from nuclein, and the uric acid and urea are always formed in the system in the proportion of 1 to 35 or 40. If a less proportion of uric acid is eliminated, it indicates that uric acid is being retained in the tissues. If a greater proportion is being eliminated, it indicates uric acid previously stored up is being dissolved out.

Since uric acid is so frequent a factor in disease, the treatment must embrace such measures as free uric acid from both the blood and the system. In general the treatment is dietetic, hygienic and medicinal. Haig says "the one thing needful is a proper diet," and restricts all red meats, coffee, tea and eggs. Breads, milk, vegetables, fruits and nuts are permitted.

In rickets and osteomalacia, however, that food richest in phosphates should be selected, that is eggs, fish, cracked wheat and oatmeal. Strawberries, tomatoes, bananas and excessive saccharine materials are generally harmful in the uric acid diseases.

The hygienic treatment consists of outdoor exercise, mountain-climbing, sea voyages, baths and massage, to increase oxidation. Flannels should be used to prevent sudden refrigeration of the surface. A dry, warm climate should be selected. The medicine should vary according to the individual type of the disorder. The salicyl group is the best to eliminate uric acid from the system, the iodids to remove it from the blood and to lower arterial tension. Hence, the prognosis in such disorders as glycosuria, albuminuria, asthma, lithiasis and the arthropathies, when observed before morbid changes occur, is much better than the former uncertain results permitted. Cells once destroyed are not replaceable, but since, by exercise, diet and the uric acid solvents, we can prevent the further destruction of cells, the disease may in many instances be arrested.

Good results from antilithemic measures in the disorders of arthritis are reported by such observers as Lyman, Potter, Shoemaker, Wilcox, Olevé and Hunter, Bigelow, Satterthwaite and many others too numerous to mention. Personally, I have experienced favorable results from antilithemic remedies in glycosuria, nasal and bronchial asthma, lithiasis, albuminuria, obesity, eczema, paresis, rheumatism, angina pectoris, recurrent typhilitis, vertigo, biliousness, dyspepsia, neuralgia and migraine.

THERAPEUTICS OF COAL-TAR PRODUCTS¹.

A CLINICAL REPORT.

Presented to the Section on Materia Medica, Pharmacy and Therapeutics, at the Forty-ninth Annual Meeting of the American Medical Association, held at Denver, Colo., June 7-10, 1898.

BY W. R. INGE DALTON, M.D.

Member American Medical Association, New York County Association, Medical Society County of Kings, and New York County Medical Society.
NEW YORK CITY.

Ægrescite medendo: "The medicine increases the disease," is an appropriate motto for the introduction of this paper, for by the unskillful exhibition of coal-tar products in disease great harm has resulted. The immense and very extraordinary development of synthetic chemistry has exerted a profound influence upon the medical practice of recent times. The German school has inundated this side of the water with their synthetic compounds—legions of them have been introduced—we have been bombarded with discoveries of new organic compounds by the organic chemist, all purporting to possess marvelous and rare virtues, and foisted upon us with the brazen assurance that they open up vast possibilities of therapeutic application. Is it not time to call a halt upon the arrogant assumption of these foreign proprietors of synthetic drugs who dictate to us with such unblushing effrontery, and give the older medicine as chance? I lift my voice against the indiscriminate use of coal-tar products, and assert that more harm has been done by the use of antipyrin, phenacetin, laetophenin, acetanilid, etc., than any good derived by their exhibition. True, they reduce temperature, but at what expense to the economy! How do they exert such a reduction? Antipyretics do so, either by lessening the generation of heat, or by aiding the operation of its loss through radiation—the labor of evaporation of perspiration and conduction. Those remedies which lessen oxidation, which depress the

¹Original abstract of the paper read before the American Medical Association.

circulation, or which produce a specific corroborant influence upon the heart center, reduce temperature, thereby diminishing heat production, while those which dilate the vascular (cutaneous) system cause the thermal loss. Antipyrin, phenacetin, lactophenin, and their congeners do certainly increase radiation by circumscribing the tissue metamorphoses. As high an authority as Shoemaker—and in my opinion there is none higher—states that phenacetin is not toxic in ordinary doses, but I have had some cases to whom I administered it which caused me great anxiety. One, in particular, a woman suffering from dysmenorrhea (congested form), to whom I gave four 10-grain doses, four hours apart, had alarming prostration, uncontrollable emesis, vertigo, profuse perspiration, with urticarial rash and deep cyanosis. Possibly, however, I may have used an impure product, made by imperfect conversion of parphenacetidin into phenacetin. Lately, I have tried lactophenin, a closely-allied product to phenacetin—with better results. Still, I was not entirely pleased with it, as it acted on the heart too strongly. The best one of the lot, which has given me entire satisfaction in dysmenorrhea and typhoid fever, is ammonol. It reduces the temperature without exerting any depressant cardiac action; on account, I suppose, of ammonia, with which it is combined. Dr. Francis E. Stewart, chairman of the National Legislation of the American Pharmaceutical Association says that practically all synthetic compounds are foreign made, and their manufacturers or agents have secured letters patent for the processes of making, or copyright protection of their names. In nearly all cases, not an ounce is made in this country; no native industry is protected, but a foreign made product is imported through an agent to whom the sick of the country are made to pay tribute. Were these agents content to accept reasonable profits there would be less ground for complaint, but when phenacetin sells in Great Britain for \$1.25 a pound, and in the United States for \$1.00 an ounce, the tax on the public becomes burdensome, and the ruling of the patent office, which makes such a condition of affairs possible, demands protest.

If I have succeeded in impressing one member of my beloved profession with the necessity of using circumspection in exhibiting these coal-tar products indiscriminately, then I am content, and I feel assured that then the afflicted may exclaim, "*Ægroto dum anima est, spes est*," for then, indeed, "to the sick while there is life there is hope."

THE RADICAL TREATMENT OF DISEASE OF THE HIP-JOINT.

Presented to the Wyoming State Medical Society, Nov. 1. 1898.

BY CHARLES G. PLUMMER, B.S., M.D.

SALT LAKE CITY, UTAH.

During the past two or three decades we have learned much in the treatment of disease of the hip-joint. Some of our knowledge is the direct result of years of research, yet more has the freshness and nearness of the teachings of men of our own age. The equipment of recent graduates in the theoretic treatment of this class of ailments is immense, but what they lack is the illustrated application. This we call experience. It is that something which we do not attain didactically—it only comes by personal contact. This fact holds equally good with almost any subject we might mention, but it is especially impressed upon

our minds with reference to surgical procedures. There was a time—and it is not so far in the past that we can not witness living examples of the fact—when cases of hip-joint disease went unrecognized. I do not say they do not go without recognition today—I wish I could. But, with the advent of new ideas, new methods have taught us more of the subject, and now fewer cases are overlooked than at any time in the history of surgery.

Much valuable time is lost in many cases by the diagnosis of rheumatism or "growing pains," and I am compelled to admit, in deference to those who treat the condition in its early manifestations from that standpoint, that their error seems excusable, for there is quite a similarity, in a general way, in the very early stages of the seizure. But when such a diagnosis is made and treatment instituted and maintained, where the cardinal points which go to make up the diagnosis of hip-joint disease are in evidence, the mistake is culpable. To be sure, neurotic reflexes with symptoms referable to the region of the hip and knee, such as preputial adhesions, anal fissures, or rectal ulcerations, have misled many most excellent men. I believe it is the search for some of these little things wherein lie our most pronounced successes. With their removal, or the elimination of their possible existence, our diagnosis is so much easier. Still, when we take into consideration the fact that the great majority of these cases occur in childhood or early youth, we may be pardoned when we say we sometimes meet cases wherein a diagnosis is not easy.

Children are so apt to magnify their ailments, they are often so unmanageable and reticent that our diagnosis is almost wholly subjective. It is sometimes impossible to conclude positively that we have morbus coxarius, from a single inspection and examination. It will pay us to keep the suspected case under close observation, seeing it perhaps every few days, with instructions to the family to look for certain prominent symptoms, upon which we are to base our conclusions. We may not observe in any one case all the pathognomonic signs of the disease, still when we see the marked flexion and abduction of the limb, either in the prone or upright position, the limited motion, the apparent ankylosis at the hip, night pains and pains referred to the knee, we can not miss it much by pronouncing it coxitis. Perhaps the subject has suffered some traumatism, perhaps not—it does not matter, for whatever the cause, the treatment is identic.

In coming to the question of treatment, I wish to state that I believe all the successful methods of treating hip-joint disease today may be termed radical. That there are degrees of radicalism we can not deny. Looking upon the results of treatment of these cases in the hands of some whom we might term antiradicals, or extremists in conservatism, I am not much impressed with the wisdom of their medico-supportive and expectant methods. The physician who allows a case to progress so far as to permit of the formation of abscess in or about the region of the hip-joint makes a grave error. And one who has not seen cases of advanced disease of the joint will find that he is totally unable to appreciate the terrific ravages such abscesses will commit. Extensive suppurative sinuses will penetrate the deeper structures of the hip and thigh, extending in some cases down the leg to the knee, forming large