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SUPRA-RENAL MELASMA, OR ADDISON'S DISEASE.

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IN the second volume of Dr. Aitken's work on "The Science and Practice of Medicine," is an article on the above subject, which presents a valuable *résumé* of what is known up to the present time about this rare disease, in which is given the following—

"*Definition.*—A morbid state which establishes itself with extreme insidiousness, whose characteristic features are, anæmia, general languor and debility, and extreme prostration, expressed by loss of muscular power, weakness of pulse, remarkable feebleness of the heart's action, breathlessness upon slight exertion, dimness of sight, functional weakness and irritability of the stomach, and a peculiar uniform discoloration of the skin, which becomes of a brownish olive-green hue, like that of a mulatto, occurring in connection with a certain diseased condition of the supra-renal capsules. The progress of the disease is very slow, extending on an average over one year and a half; but it may be prolonged over four or five. The tendency to death is by asthenia, the heart becoming utterly powerless, as if its natural stimulus, the blood, had ceased to act."

The disease thus defined by Dr. Aitken, was first brought to the notice of the profession very imperfectly by Dr. Addison, under the title of "a remarkable form of anæmia," and an abstract of his remarks before the South London Medical Society, in which he speaks of the anæmia, debility, and diseased condition of the supra-renal capsules, but not referring to a dark discoloration of the skin, was published in the *Medical Gazette*, March 23, 1849, page 518, and later than this in the *Medical Times and Gazette* for December, 1855, and March, 1856, may be found reviews of his then recent monograph on the "Diseases of the Supra-renal Capsules."

Dr. Addison, in this disease, which has since borne his name, recognized and described the peculiar cachexia, the important symptoms of the disease, the connection of *bronzed skin* with the diseased

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capsules, but he imagined that any disease of the capsules would bring about this diseased condition. Subsequent observation has proved this idea not to be true, and it was left for Dr. Wilks, in *Guy's Hospital Reports* for 1862, to define and describe the true pathological characters of the disease, which he has done as follows, stating it to be of one form only, that which Dr. Addison termed "scrofulous." Dr. Wilks says:—"When the disease is recent, the organ is somewhat enlarged, and changed into a material which is semi-translucent, of a gray color, softish, homogeneous, and when examined microscopically is found to be without structure, or sometimes slightly fibrillated, or containing a few abortive nuclei or cells. This lardaceous kind of material is first deposited, and resembles what is often seen in the early stages of scrofulous enlargement of the lymphatic glands; subsequently it undergoes a decay or degeneration as in these glands, and changes into an opaque yellowish substance; and thus the two materials are constantly found associated. At a later period, as in a scrofulous gland, this may soften into a putty-like matter, or it may dry up, leaving the mineral part as a chalky deposit scattered through the organs. These, then, are the changes: first, the deposition of a translucent, softish, homogeneous substance; subsequently the degeneration of this into a yellowish-white opaque matter; and afterwards a softening into a so-called abscess, or drying up into a chalky mass. Occasionally, also, some fibrous tissue may be found among the organs, being the product of an inflammation which has united them to the kidney, liver, and adjacent parts." Some years are necessary for the production of these changes.

The definition which I have quoted above from Aitken seems to me to be very perfect; giving, as it does, a precedence to that condition and class of symptoms which Dr. Addison noticed and considered to be the most important indications of the disease, namely, the asthenia, which is not necessarily accompanied by emaciation, but is expressed by a loss of muscular power, weakness of pulse, feebleness of the heart's action, breathlessness on slight exertion, dimness of sight, functional weakness and irritability of stomach, and, lastly, the bronzing of the skin.

This last condition, owing to its great peculiarity, its so readily attracting the eye, has by many been rated too high in the scale of symptoms, according to its real value, and from Dr. Wilks's article it is evident that Dr. Addison recognized it at its true worth. Discoloration of the skin is but a symptom, interesting when it occurs, varying in amount in different cases, and in some not present at any time in the course of the disease, and, when occurring, coming on at a varying period after the establishment of the more prominent symptoms above enumerated. It is due to a deposition of a layer of pigment in the rete mucosum, the same seat as in the dark races, and is uniformly distributed over the entire surface. Numerous cases

have been described as exhibiting the discoloration in patches, but the peculiarity of patches of deeper color should not lead us from the fact, that the even distribution of color over the surface of the body is the more valuable and the first to be noticed in its diagnostic importance; and also it is to be remembered that those parts where pigment naturally exists become darker than other parts of the skin. When discoloration is well developed, the patient looks like a person of dark or mulatto blood.

That this disease is rare, as I have stated, may be realized from the fact, that when Dr. Addison published his original paper, it contained only five cases that were unmistakable instances, and after a lapse of about seven years, during which the attention of the profession in England had been strongly drawn to the existence of the newly described disease, and many pathological specimens of the supposed diseased capsules had been sent to Dr. Wilks, he published his paper in 1860, and his list of cases comprised only twenty-five, and these included the five originally reported by Dr. Addison. In *Braithwaite's Retrospect of Medicine* I find no allusion to the disease since that time. Here in Boston, although other cases may perhaps have occurred, I have heard only of seven, four of them having been patients at the Massachusetts General Hospital, including one now there, two in private practice, and the one which I now report.

The patient, M. R., was an unmarried girl, 19 years old, born in England, but had been in America the greater part of her life. She was admitted to the Boston City Hospital on the 12th of November last, as convalescent from typhoid fever. She stated that her father died of phthisis; that she had considered herself as generally well, but for the last eighteen months she had not felt as strong as formerly, and had occasionally been troubled by a weak and irritable stomach. Four weeks before her entrance, after being run down by hard work, but not by exposure, she became ill, with nausea and vomiting, some pain in the bowels, and slight diarrhoea, lasting about two weeks; she, however, had neither chill, headache, epistaxis, nor pain in back and limbs. Since this trouble occurred, she had been chilly in the morning and feverish at night.

On entrance, she was confined to her bed, and very weak. On sitting up she felt dizzy, but not when lying down. She had no rose spots. She had slight dry cough, with an occasional expectoration, which she says she has had as long as she remembers. At this time she was under the care of Dr. F. E. Oliver, and having improved in condition, on the 28th of November, after a stay of sixteen days, was discharged as well.

On the 14th day of December last, she re-entered the hospital, coming under my care, and reported that since leaving she had felt very weak and unable to stand long at a time, and sometimes feeling dizzy. Has had some shooting pains in front of chest, and a constant pain below left breast. Slight cough, as for years past, with

some shortness of breath, and a sensation of smothering in her chest, coming on after the exertion of working or talking. Palpitation of the heart, which has existed for the past year, is now worse, coming on frequently without any exciting cause. Frequent headache. No spinal tenderness, nor pain in back. Two spots of episternal tenderness. Slight constipation. Urine free and natural. Catamenia, having been absent for two months, appeared four days before, and disappeared the morning of the day of entrance. Skin is very dusky, which is said by the patient to have been the case previous to the fever.

Attracted by the record of the chronic cough, on seeing her for the first time, the day after her entrance I carefully examined her chest, recording a diminished respiration throughout the whole of the right lung. At the left supra-spinous fossa, occasional obscure crepitus, not persistent. In left subclavian space, harshness of respiration, without crepitus. Nothing abnormal by percussion, and considering that there might be enough of incipient phthisis to account for her condition, I ordered the following:—*R.* Olei morrhuae, spts. frumenti, āā ʒ ij.; spts. lavandulae comp., ʒ ss. *M.* ʒ ss. three times a day.

Dec. 20.—Vomited yesterday afternoon and to-day; is slightly constipated. I suspended the oil mixture, and prescribed *Pil. hydragryri*, gr. x., h. s.; and *pulv. Rochelle*, mane.

On the 22d of December, it never having been my fortune to have met with a case of Addison's disease, I first suspected the true nature of my patient's trouble, my attention being strongly attracted by the contrast between the dusky skin and the pearly eye, and the record is as follows: "Medicines ordered on the 20th produced one free dejection. Patient is now in bed, feeling weak and nauseated, and complaining of headache and debility of stomach. Color of skin is dusky, dark brownish, with still darker patches about lips, forehead, and folds of neck. Sclerotics have a clear, white, pearly, and transparent look. Eyesight is somewhat lessened in power, with occasional spells of dimness and confusion.

Dec. 23d.—Pulse 88, small and compressible. Has vomited this morning, and complains of headache and debility. *R.* *Pulv. ferri*, gr. xx.; *pulv. rhei*, gr. xl.; *ext. gentianae*, q. s. *M.* *Ft. in pil.* No. xx. One three times daily.

24th.—No vomiting, but nausea and weakness of stomach. Blood, examined by microscope, shows white corpuscles in excess—about three times the normal number. Is constipated. *R.* *Pil. aloes et myrrhae*, No. ij., h. s., p. r. n.

26th.—Ophthalmoscopic examination, by Dr. Williams, shows some opacity of cornea and congestion of retina.

From this time on, until Feb. 4th, the patient continued to gradually grow worse. Days of comparative comfort would be suddenly interrupted by pains in the stomach, and spells of vomiting. Palpita-

tion of the heart and shortness of breath increased without any apparent cause. There was progressive muscular weakness, felt particularly in the thighs, so that rising from a low seat was difficult; ascending a flight of stairs became almost impossible, and walking the length of the ward was fatiguing, hurrying the heart's action and shortening the breath. The discoloration of the skin steadily deepened, being universal, the dark tone of the face showing out in striking contrast the whiteness of the eyes, and of a remarkably fine set of teeth, while strongly marked patches, of very dark color, on the dull, dusky base, were particularly noticeable at the forehead, lips, the folds of the neck, and loins, over scapulæ, around the umbilicus, and over the fronts of the knees. The arcolæ were very dark, and a square patch over the epigastrium marked the position of some formerly applied counter-irritant.

A microscopical examination of the blood, on the 2d of February, showed nearly double the number of white corpuscles seen as the previous examination, on Dec. 24th.

On February 4th, she reported a sleepless night from great pain throughout both hypochondria, and her face was expressive of pain; she could not draw a long breath. Nothing abnormal was heard on such an exploration of the chest as I was able to make without giving her distress. She had some greenish, watery diarrhœa.

Feb. 5th.—Pulse 124, small and feeble. Countenance dusky, exsanguine. Tongue, bright-green coat. Conjunctivæ, for the first time, are faintly tinged with a yellowish-green color; this is but slightly marked. Vomited matters are described as sometimes blackish, at others like "chewed grass." At time of visit, vomiting to amount of half a pint of matter looking like "green pea soup." Bowels open this morning, with bright green matter. Is very weak, and stomach rejects everything.

From this time the patient rapidly sank, the nausea and vomiting resisting all remedies, such as sinapisms to epigastrium, chloroform internally, hydrocyanic acid, creasote, subnitrate of bismuth, cracked ice, brandy and effervescing drinks, &c., and on the 7th of February she died, while I was making my visit, after between three and four days of uncontrollable suffering.

The *autopsy* I made twenty-four hours after death, circumstances so limiting my time that I was only able to examine the contents of the abdomen.

The body was well formed and rounded. Rigor mortis well established. A layer of yellow subcutaneous fat, from one half to three fourths of an inch in thickness, was seen on cutting the abdominal walls. Discoloration of the disease was marked as in life.

The liver was large, and the gall-bladder distended with greenish bile, both appearing normal, as did the spleen and pancreas. In the stomach were a few small spots of dark ecchymosis; no other disease was seen in the alimentary canal. The small intestines were

pale and distended with gas. The kidneys were both large, but appeared perfectly healthy. After a careful search the left supra-renal capsule could not be found. The right supra-renal capsule was found to be much atrophied. In its body were seen depositions of the semi-translucent, grayish matter described by Dr. Wilks, and in its substance numerous round, distinct masses of yellow, firm, opaque matter, one of which gritted under the edge of the knife, as from chalky deposit. These masses were of varying sizes, from that of a swan shot to that of small size or No. 8 shot.

The uterus and Fallopian tubes were slightly enlarged, and were covered with a superficial, dark, venous congestion. The substance of the uterus and ovaries normal.

This case bears, in two respects in particular, a resemblance to Case No. 23 of Dr. Wilks's series, in the fact that both patients died from prostration after three days' uncontrollable vomiting, and in the fact that one of the capsules could not be found at the autopsy.

With regard to the absence of the capsule, Dr. Wilks says:—"Cases are recorded where no supra-renal capsules existed in the body, and this has already been used as an argument against Addison's conclusions as to their importance in the animal economy. It has, however, never yet fallen to my lot to note their absence, and it being so I am naturally skeptical as to the statement, especially when I have found students at a loss to find them, when the body has been before me, while on a stricter search they have been discovered, mutilated by the act of manipulation, having perhaps previously undergone a softening process from decomposition. If, too, suppuration had existed, the organ would no doubt have been destroyed, for as soon as the abscess had been burst no trace of the organ would be left."

In which way to truly account for not finding the capsule in my case I cannot state; only I can say that careful search was made for it.

The case I have reported has possessed to me a double interest; not merely from being a finely marked instance of this rare disease, as shown by its insidious development, the establishment of the constitutional symptoms, subsequently the pigmentary discoloration, the death by asthenia, and the pathological proof; but also from being one more link in the chain of evidence which proves the integrity of Addison's disease, a matter which has been denied by many eminent men in the profession, who have erred in the same way that Dr. Addison himself did originally, in the supposition that any disease of the capsules, such as tubercle, cancer, and the like, would develop the disease in its course, as defined by Aitken at the head of this paper.