CLINICAL MEMORANDA.

ARGYRIA: REPORT OF TWO CASES.

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Argyria or poisoning by silver is now an uncommon cause of skin pigmentation During the past year, however, two patients suffering from argyria were referred to Dr. J. H. Wright, for investigation because of 'cyanosis' ascribed to heart disease, and it is felt that this justifies putting them on record as a reminder that argyria should be considered still as a possible cause of any bluish pigmentation of skin of obscure origin.

Case 1. Miss A. M., aged 24 years, was referred on 9th February, 1952, because of bluish-tinting of the skin, for an opinion with regard to the possible relationship to a systolic murmur audible at the mitral area. She made no complaint of breathlessness, cough or palpitation. Her appetite was good and apart from occasional heartburn she had no dyspepsia.

She stated that she had suffered from 'coeliac disease' between the ages of 2½ years and 11 years and that during part of this time she was treated with silver nitrate by mouth. She did not know the amount or the duration of treatment, but had been told that she was given 'fairly large amounts.' Some time after the institution of this treatment, she was unable to say how long, her skin and gums became very dark in colour, the gums being almost black.

On examination she was of slight build; her skin was a faint bluish-brown colour; there was no abnormal pigmentation of the mucosa and there was no increased pigmentation of those parts of the skin exposed to sunlight or to pressure. There was no evidence of any significant abnormality of the cardiovascular system. The pulse rate was 82 per minute and the blood pressure 130/80 mm.Hg. Heart sounds were of good quality; a short blowing systolic murmur was audible with the first sound at and inside the mitral area. X-ray screening showed normal lung fields and normal aortic and cardiac shadows. Examination of chest, abdomen and nervous system revealed no abnormality. The haemoglobin was 94%. Red cell count 4,530,000/cu.mm. and white cell count 6,200/cu.mm. The colour of the blood was normal. Urine was clear.

Case 2. Mrs. G. G., aged 56 years, was admitted to hospital on 17th March, 1953, for investigation as to the nature of a bluish-grey pigmentation of her skin which had been present for about 14 years and had become more intense during the past 3 years. For some years she had suffered from shortness of breath on exertion, and after hospital investigation a tentative diagnosis of valvular disease of the heart and hypertension had been made. Repeated blood examinations had been carried out to determine the cause of skin pigmentation, and the possibility of cyanosis being due to arterio-venous shunt was raised. Sulphaemoglobinaemia or methaemoglobinaemia also appears to have been in the minds of those carrying out the investigation.

The patient was an alert intelligent middle-aged woman. She was of average build and well nourished. Her skin was a brownish, slatey-blue colour; buccal mucosa was also affected. Pigmentation was deepest in face, conjunctivae, hands and finger nails.

She stated that she was first aware of tinting of skin and nails in 1938, and direct questioning elicited the information that she had begun to use 10% Argyrol nose drops (silver proteinate) in 1936 and had continued to use them since. Pigmentation had fluctuated in intensity but never disappeared, and had become deeper over the past 3½ years.

Her blood pressure was known to be raised in 1948. In 1949 she had severe and prolonged chest pain which lasted for 2 hours, and a few days before admission to the wards she had a further attack of pain of less severity, but lasting on and off for two days. Blood pressure on admission was 180/120 mm.Hg. but fell to 170/100. A harsh systolic murmur was audible over the aortic area and in the vessels of the neck. No radiological evidence of calcification of aortic valve was obtained. Electrocardiographic changes were indicative of posterior and lateral coronary artery insufficiency.

The haemoglobin was 87%, the red cell count 4,180,000/cu.mm. and the white cell count 5,600/cu.mm. No abnormal blood pigments were found. Liver function tests were within normal ranges.

Skin biopsy was done and a stained section examined by dark ground illumination showed fluorescence round the basal membranes of the sweat glands and immediately under the corium, characteristic of silver deposition. No silver was detected in the hair.

Both patients were advised not to use silver preparations. No other line of treatment was recommended as it seemed to us after a study of the literature that all the suggested remedies had proved to be ineffective.

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