whom, following sensitization to and subsequent administration of sulphonamides, there occurred (i) sensitization dermatitis, (ii) toxic erythema, (iii) dyspnoea resembling asthma, (iv) migraine, and (v) polyarteritis nodosa. Our case presented a somewhat similar train of events providing presumptive evidence of an allergic basis, but questioning failed to elicit any history of exposure to sulphonamides or any personal or family history of allergy.

The chemical compounds, other than sulphonamides, sensitivity to which has been held responsible for polyarteritis nodosa are: desoxycorticosterone acetate (Selye *et al.*, 1944), thiourea (Gibson and Quinlan, 1945), organic arsenicals (Miller and Nelson, 1945), and iodine (Rich, 1945). In our case there was no history of exposure to any of these drugs. The marked eosinophilia which was present in our case could not be regarded as more than suggestive evidence of allergy, as it has been shown to be an inconstant concomitant of at least one form of proved hypersensitivity to drugs (e.g., Cruickshank and Squire, 1949), while it may occur occasionally in conditions demonstrably without allergic basis (Bickel, 1950).

Accordingly, we have regarded the condition described above as a diffuse arteritis, resembling other more clearly defined varieties of granulomatous arteritis, but have considered the likelihood of its having been allergic in origin as unproved.

Summary

A case is described which showed the progressive development of diarrhoea and vomiting, acute erythroderma going on to exfoliative dermatitis, Raynaud's symptom-complex leading to gangrene of the fingers, transient visual disturbances, enlargement of spleen and lymph nodes, pyrexia and leucocytosis with eosinophilia, thrombosis of temporal and radial arteries, and remarkable and unexpected recovery.

Biopsies from various sites showed evidence of widespread inflammatory arteritis with eosinophilic infiltration of the tissues and viscera.

The relationship of this case to various other conditions showing similar histological changes and of supposedly allergic origin is discussed.

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MULTIPLE ARGENTAFFINOMATA OF ILEUM REVEALED BY SECONDARY GROWTH IN EPIDIDYMIS

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Carcinoid tumours, or argentaffinomata, are derived from the Kulschitzky cells, which are normally distributed throughout the mucosa of the gut from stomach to anus. Many hypotheses have been suggested (Masson, 1928), but little is known for certain about the function of these cells, and they are remarkable chiefly by their ability to reduce silver salts. The scarred appendix is the only common site in which these cells may proliferate to form carcinoid tumours, which usually remain small and rarely metastasize.

Small tumours occur in the small intestine and occasionally in the large intestine and rectum (Cooke, 1931; Willis, 1940; Stout, 1942), where these slow-growing tumours are usually multiple and are often symptomless until eventually they produce stenosis of the intestine. Secondary deposits from these intestinal growths have been reported in most organs of the body, but the only record of a secondary growth in the testis is by Cope (1930), who found a carcinoid in the testis eight years after resection of a part of the small intestine which contained a single annular primary growth.

Case Report

The patient, aged 73, stated on questioning that when 20 years old he had been hit in the right testis and that the testis had remained hard and slightly enlarged. After a five-years history of indigestion, a laparotomy performed at the Archway Hospital in 1938 revealed an adherent gastric ulcer, for which a posterior gastro-jejunostomy was performed. No other abnormality was noted at this time. In 1944—that is, six years later—he was admitted to the Radcliffe Infirmary under Mr. Olmstead, with an irreducible right inguinal hernia. During the operation for repair of the inguinal canal the right testis was seen to be abnormal and was removed. The patient made an uneventful recovery. The cut surface of the mass removed, which measured 8 by 5 by 2 cm., showed an apparently normal testis, while the epididymis was surrounded by a fibrous mass in which there

were small indefinite, firm, pale-yellow areas. Microscopically, the testis showed normal senile atrophy while the yellow areas showed masses of cells arranged in the classical rosette pattern of an argentaffinoma. The affinity of these cells for silver was confirmed.

The patient was readmitted three months later for further investigations in an attempt to find the site of the primary growth in the hope that it would prove removable. He then considered he was quite well. (Only after the second operation did he realize in retrospect that he had had some constipation and colicky abdominal pain.) Complete x-ray examination of the chest and alimentary tract revealed no abnormality; nevertheless, a laparotomy was performed and the terminal 3 ft. (0.9 m.) of small intestine was seen to be studded with about 60 white plaques varying in size from 0.2 to 2 cm. in diameter, distributed at random beneath the serosa. The smaller ones produced little or no puckering of the serosa, while the larger ones caused gross puckering and marked stenosis of the intestine. There was a smooth mass 5 cm. in diameter replacing the lymph nodes in the mesentery, and several small secondary deposits were felt in the liver. Three feet (0.9 m.) of intestine and the mass in the mesentery were removed and a side-to-side anastomosis was performed in order to relieve the partial obstruction.

Photograph of part of the specimen bisected to show three tumours under the muscularis mucosa, one producing stenosis and a portion of the secondary mass in the mesentery.

Recovery was uneventful, and two years later, in 1946, the patient had put on weight and felt better than before the operation. Clinical, x-ray, and laboratory examinations then showed nothing abnormal. He died in 1947, three and a half years after the original operations, after a short terminal illness. The death certificate states that the cause of death was due to "myocardial degeneration due to secondary carcinoma," with "generalized oedema of the limbs" as a subsidiary cause. No further details are available.

The second specimen is illustrated in the accompanying photograph. There was little muscular hypertrophy at the proximal end of the specimen, yet there was marked stenosis at one point due to a growth some 2 cm. in diameter which had invaded the circular and longitudinal muscle and had produced constriction and hypertrophy of the muscle. The growths varied in size from this largest one to those causing only a slight mound 2 mm. across under the mucosa. On section they were all homogeneous, firm, and whitish yellow in colour. The mass in the mesentery was of similar texture and colour, and appeared to have absorbed much of the mesenteric tissue, causing shortening of the mesentery. Elsewhere the mesentery and glands were normal.

Histological examination of sections taken from many growths of different sizes shows that the neoplastic cells occurred first on the inner aspect of the muscularis mucosa, but that they soon spread through the muscularis while leaving the mucosa intact. The tumours appeared to extend

externally to the muscularis, slowly involving the circular muscle, while the mucosa throughout was not involved. The pattern of the neoplastic cells in the primaries and in the mesenteric mass was characteristic, with solid clumps or strands of small polyhedral cells lying in scanty stroma through which ran hypertrophied muscle bundles.

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ARGENTAFFIN TUMOUR OF THE ILEUM WITH PERFORATION

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The rarity of epithelial tumours of the small intestine is indicated by the work of Dockerty and Ashburn (1943), who systematically examined the histological details of 130 tumours encountered at the Mayo Clinic in the years 1906-43. Only 30 of these were accepted as argentaffin tumours. Similarly, Raiford (1933) recorded 29 argentaffin tumours of the alimentary tract among 62,000 pathological specimens at the Johns Hopkins Hospital, and, of those, 17 were of the appendix and only 9 in the small intestine. Ariel (1939) succeeded in finding 237 cases in the literature, and Dangremond (1942) added 46 cases to those quoted by Ariel.

The manner in which the tumour comes to light seems to be most commonly as an unexpected finding at necropsy. Of Dangremond's collected cases, 23 were discovered in this way and 15 were found during surgical intervention for acute or subacute obstruction, details of the remaining 8 being either irrelevant or lacking. Again, of Ariel's 11 cases six were discovered post mortem, and all the six reported by Willis (1950) were necropsy findings. Cooke (1931), in reporting 11 cases, describes the case of a man aged 60 who developed severe pain and general abdominal tenderness while under observation for recurrent epigastric pain. At laparotomy a tumour of the ileum 4.5 cm. in diameter was found which had perforated, a quantity of yellow fluid having leaked into the abdominal cavity, and the liver was studded with metastatic nodules. The patient died 14 days after the operation. This case is closely similar to the one now recorded. In reviews of the abundant literature Humphreys (1934) and Ariel (1939) do not mention perforation as a clinical feature of the disorder.

Case History

The patient, a married Iranian woman aged 40, had been well until a year before her admission to hospital. At that time, during the fast of Ramazan, she had fasted for 24 hours and then drank a quantity of iced water. Immediately she was seized by violent abdominal pain, which