

SCURVY OCCURRING IN A PATIENT ON AN ULCER DIET : REPORT OF A CASE.

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Scurvy in this country occurs most commonly in elderly males who live alone and who subsist on a diet grossly deficient in vitamin C. Scurvy due to rigid adherence to a peptic ulcer diet is rare but such cases have been reported by Davidson (1928), Barling (1935), Wood (1935), Platt (1936) and Ludden *et al.* (1941); cases were also described in the series of scorbutics collected by Prunty and Vass (1944), and McMillan and Inglis (1944). The majority of these cases were in middle or old age.

The present case is one of a relatively young man who developed scurvy while on a bland diet following laparotomy for repair of a perforated duodenal ulcer.

CASE REPORT.

W. P., an unemployed labourer aged 31, attended the Blood Clinic of the Royal Infirmary, Glasgow, in October, 1953, complaining of a purpuric eruption of the legs of 3-4 months' duration. Examination revealed the characteristic clinical features of scurvy; his skin was dry and rough and petechiae and ecchymoses were present on the legs and arms. The gums were bluish, hypertrophied, and infected; the teeth were carious and the breath foul.

In March, 1952, he had undergone a laparotomy for repair of a perforated duodenal ulcer. Prior to this short illness he had not experienced dyspeptic symptoms but after discharge from hospital he suffered intermittently from postprandial epigastric pain. He was put on to a bland diet but gradually eliminated various items such as fruit and vegetables because he considered that they precipitated ulcer symptoms. Eventually his diet consisted of eggs, fish, fowl, boiled meat, bread, butter, milk and tea. He had not taken synthetic ascorbic acid.

Laboratory findings. The patient was admitted to hospital and given a diet low in vitamin C while a vitamin C saturation test was carried out (Harris, 1943). 700 mg. synthetic vitamin C was given orally daily; urinary saturation was not detected until the seventh day. There was no anaemia (Hb. 14.2 g.%; R.B.C. 4.82×10^6 /cu.mm.; W.B.C. 10.4×10^3 /cu.mm.; platelets 196×10^3 /cu.mm.). Evidence of increased capillary fragility was shown by a positive Hess test. The bleeding time was normal and no abnormality was detected in the blood clotting mechanism.

Treatment. When the Harris test indicated saturation the daily dose of vitamin C was reduced to 100 mg. and a bland diet was given. Clinical improvement was rapid and the patient was discharged to continue on this regime.

COMMENT.

The paucity of reported cases of scurvy of this type is surprising in view of the low vitamin C reserves found in series of unselected patients on 'gastric diets' (Archer & Graham, 1936; Harris *et al.*, 1936; Lazarus, 1937; Ludden *et al.*, 1941; Lund, 1942; Ebbesen & Rasmussen, 1944; Crescenzo & Cayer, 1947). That vitamin C reserves may be very low without clinical scurvy was shown by Ebbesen and Rasmussen (1944) who 'provoked' scurvy in two patients while investigating the vitamin C reserves of a series of ulcer patients.

The object of medical treatment of peptic ulceration is to encourage healing of the ulcer and in view of the vital part which vitamin C plays in wound healing adequate reserves of this substance are obviously desirable. Inadequate intake is probably the sole cause of the 'subclinical scurvy state' found in patients with peptic ulcers since absorption of vitamin C is not affected by organic disease of the stomach although diminished absorption may be associated with small bowel lesions which causes diarrhoea (Ludden *et al.*, 1941).

The ulcer patient is singularly liable to require emergency surgery and in such an event the vitamin C reserves may be of great importance. Lund (1944) observed that post-operative complications, especially wound disruption, were more frequent in cases of peptic ulceration when vitamin C reserves were low.

The quantity of vitamin C available in diets is variable and reinforcement by synthetic vitamin C is justifiable, and inexpensive. It is difficult to be dogmatic about the quantities required as opinions vary as to the normal requirement (Yudkin, 1952); opinion is unanimous, however, that 100 mg. of synthetic vitamin C daily will maintain tissue saturation and this is a convenient amount to prescribe as a routine measure in all cases of peptic ulceration treated by dietotherapy.

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REFERENCES.

- Archer, H. E. & Graham, G. (1936). *Lancet*. **2** : 364
 Barling, B. (1935). *Brit. med. J.* **1** : 358
 Crescenzo, V. M. & Cayer, D. (1947). *Gastroenterology*. **8** : 754
 Davidson, P. B. (1928). *J. Amer. med. Ass.* **90** : 1014
 Ebbesen, I. & Rasmussen, M. (1944). *Acta med. Scand.* **117** : 507
 Harris, L. J., Abassy, M. A., Yudkin, J. & Kelly, S. (1936). *Lancet*. **1** : 1488
 Harris, L. J. (1943). *Lancet*. **1** : 515
 Lazarus, S. (1937). *Brit. med. J.* **2** : 1011
 Ludden, J. B., Flexner, J. & Wright, I. S. (1941). *Amer. J. digest. Dis.* **8** : 249
 Lund, C. C. (1944). *New Engl. J. Med.* **227** : 247
 McMillan, R. B. & Inglis, J. C. (1944). *Brit. med. J.* **2** : 233
 Platt, R. (1936). *Lancet*. **2** : 366
 Prunty, F. T. G. & Vass, C. C. N. (1944). *Lancet*. **1** : 180
 Wood, P. (1932). *Lancet*. **2** : 1405
 Yudkin, S. (1951-52). *Lectures on the Scientific Basis of Medicine*. The Athlone Press