rather than of folic acid. Absorption of vitamin B₁₂ was at the lower limit of normal and was improved by intrinsic factor. However, the absorption was higher than that found in pernicious anaemia, and the presence of free acid in the gastric juice and the normal appearance of the gastric mucosa do not confirm this diagnosis. The marginal absorption of vitamin B₁₂ was probably a factor in the development of deficiency of this vitamin rather than of folic acid.

The serum vitamin B₁₂ level of 120 µg./ml. is significantly low, but it is higher than that usually found in cases with megaloblastic erythropoiesis due to vitamin B₁₂ deficiency. It seems probable that the depletion of vitamin B₁₂ was greater in the bone marrow than in the serum, and that this was due to increased utilization of the vitamin in the marrow by proliferating myeloma cells.

I wish to thank Dr. E. H. Moorhouse and Miss Lilian Harwood, of the haematology department, Sefton General Hospital, and the staff of the radioactive isotope department, Liverpool Radium Institute, for their help, and Mr. Alan Scott for preparing the photographs.

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Addiction to Poppy-heads in England

Addiction to poppy-heads (unlanced capsules of *Papaver somniferum*, known as "post") used to be prevalent in India and possibly in China (Chopra and Ghose, 1931). The literature contains only a very few Indian and no European or American references (H. Halbach, 1962, and H. Isbell, 1962—personal communications).

The following description concerns a recent case of poppy-head addiction in an Indian who has lived in England for the past 10 years.

CASE REPORT

A 38-year-old Indian Sikh who worked in a rubber factory was admitted to St. Bernard's Hospital on July 20, 1962, as an informal patient.

On admission he was unkempt and agitated, and complained of chest pain, severe insomnia, anorexia, obstinate constipation, and lack of interest; he had been off work for two weeks. He was well orientated, rational, and not hallucinated or deluded. Apart from hypertension (230/130) there was no other abnormal physical finding. Failing to procure poppy-heads, he had gradually lapsed into this state and ultimately lost his job. He had been irritable and abusive towards his relatives.

Previous History.—This was obtained from the patient and his sister, with whom he was staying. He was born in 1924 in the Punjab, India. His childhood was uneventful. He left school at 15, and worked in the fields, railway police, and Indian Army before he came to England in 1952. For eight years he worked in a rubber factory, until 1961, and since then had had three other factory jobs. He married in his early twenties and had left his wife and three children behind in India. He

did not smoke, and took alcohol in moderation. His relatives described him as a vacillating and unsure personality.

History of Poppy-head Addiction.—He started taking poppy-heads in 1950 in the Punjab along with his (already addicted) friends in order to increase his libido and sexual potency. Initially the capsules were quite satisfactory, but gradually they became less effective, and soon he could not do without them, developing severe withdrawal symptoms—for example, yawning, sneezing, pains all over, restlessness, constipation, anorexia, insomnia, irritability, and lack of concentration. After coming to England he did not take poppy-heads for three years. However, after an accident causing pains in the legs he searched for poppy capsules and finally found some in a chemist's shop. He started with one capsule (decoction) daily, gradually increasing to two capsules thrice daily. After 30 minutes he used to feel well, happy, and vigorous, and could do prolonged manual work without fatigue. Gradually this effect wore off, and after about four hours he felt lethargic, was devoid of stamina and initiative, and had no interest in work; symptoms were quickly relieved on taking further capsules. Two and a half years ago he was admitted to another hospital for similar troubles.

His condition improved rapidly on tranquillizers, hypnotics, and vitamins. He attended group-therapy sessions along with alcoholics and other drug addicts. He left hospital on August 17, appearing well physically and mentally.

When seen on two subsequent occasions (December 1 and 8) he looked well and happy and had gained 10 lb. (4.5 kg.) in weight. He denied having taken any poppy-heads since discharge, but his relatives were doubtful about it.

COMMENT

Poppy capsules were used very early in India to produce euphoria, but in the 1920s this form of addiction was common only in the Punjab and Jaipur, usually among the lower social classes (Chopra and Ghose, 1931). The present case conforms closely to the usual picture described by those authors. They found that the habit, once developed, was more difficult to break than in the case of opium addicts. Compared with opium the excitement stage is more pronounced, and the ensuing depressed stage much less marked. The long-standing "post" addict deteriorates both mentally and physically. Abstinence symptoms resemble those of opium. We have not come across any other case of poppy-head addiction in this country nor have we heard from colleagues of any such cases. However, inquiries showed that two chemists' shops in a local district (which contains a large Indian population) and a chemist in a near-by area sold considerable quantities of poppy-head recently, and the wholesalers stated that they had sold increasing quantities within the past few years.

The official price-list published by the wholesalers includes the drug under Part 1 of the Pharmacy and Poison Act, which allows it "... to be sold only by an authorized seller of poisons." (Incidentally our patient claims to have had to pay three times the listed wholesale price.) Under the circumstances it seems possible that there are other cases in this country (especially among Indians) which go unrecognized.

We are grateful to Mr. D. A. M. Anderson, pharmacist at St. Bernard's Hospital, for his help with our inquiries.

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Correction.—We much regret a misprint in a cross-heading in the paper on "Pelvic Recurrence after Excision of Rectum for Carcinoma" (July 6, p. 13). The heading (on p. 15) should have read "5. Extent of Spread of Primary Tumour," not "Urinary Tumour."