needed without delay. Two such patients, treated with iproniazid, had to be admitted to hospital hurriedly because of fear of suicide.

It is interesting to note that only one patient who complained of depression but had lost no weight was improved by iproniazid, and that a number of others stated that their symptoms were made worse. This is in contrast with the much better results in those who had lost weight. It was also noticed that E.C.T., either previous or subsequent to treatment with iproniazid, also tended to aggravate the symptoms of some of those patients who had lost no weight and were made worse by iproniazid. It is possible that an underlying chronic state of tension was present in many of these patients, and this may be why they felt worse with both treatments. Iproniazid certainly caused obvious anxiety states to flare up in a remarkable way after two or three days of treatment, and, in fact, a trial of 150 mg. of iproniazid daily for three days was often useful in differentiating between a tension state and a true depression; patients complained of intense anxiety, weakness, palpitations, and an increase in phobias, but if treatment was continued long enough a number did notice increasing appetite.

Obsessional states, like anxiety states, were not helped, and two cases of anorexia nervosa, given iproniazid to the limit of tolerance, failed to increase their weight and noticed no change in appetite on out-patient treatment.

Side-effects.—These depended largely upon the dosage, and occurred increasingly when 150 mg. or more of iproniazid a day was given. Constipation, impotence, decreased need of sleep, dryness of mouth, and blurring of vision were all reported. These are common symptoms in depression, but seemed to be caused by the drug, since they disappeared on stopping it; and they would sometimes be seen despite improvement in successful cases. Six patients had symptoms of postural hypotension, such as sudden dizziness and vertigo on standing, and two patients actually had attacks of fainting until they stopped the drug. Systolic blood pressure showed a drop of only 10–20 mm. from normal, but patients were free from side-effects at the time of measurement. An interesting side-effect was noticed in patients receiving modified insulin. Those who had previously had 20 or more units of soluble insulin without hypoglycaemic reactions began, two or three days after starting iproniazid, to become drowsy and difficult to arouse. One woman at first sight seemed to have lapsed into coma, but there was no sweating, and blood-sugar estimates were within normal limits.

Conclusion

Iproniazid is of value in the treatment of mild depression associated with loss of weight, and will often lead to a dramatic improvement in suitable cases. It is of no use in severe depression, and may be dangerous if given to agitated patients, for whom electric convulsion therapy is usually needed without delay. Indiscriminate use of iproniazid by practitioners is therefore to be avoided, but in carefully selected cases it is well worth a trial.

I thank Dr. William Sargent for his encouragement and advice, and Dr. Mary Briggs, of Roche Products, for a generous supply of marsilid.

REFERENCES

- Crane, G. E. (1956). *J. nerv. ment. Dis.*, 124, 322.
Kamman, G. R., Freeman, J. G., and Lucero, R. J. (1953). *Ibid.*, 118, 391.
Kline, N. S. (1957). In *Symposium on Biochemical and Clinical Aspects of Marsilid*, November, 1957. New York. To be published.

The St. Marylebone Operatic Society has presented £118 to the National Society for Cancer Relief as a result of two performances of *The Mikado* at the St. Pancras Town Hall last January. The Society will be presenting *The Gondoliers* in September and the proceeds will again be devoted to the National Society for Cancer Relief.

Medical Memorandum

Calcinosis Universalis

Atkinson and Parkes Weber (1938) divided cases of calcinosis into two main groups—one in which the deposits of calcareous material are confined to the skin and subjacent tissues, and which they termed “calcinosis circumscripta,” and a second or universal type, “calcinosis universalis,” in which the distribution is more widespread and the degree of severity of the lesions varies greatly. The skin, muscle, tendon fascia, and nerves may be involved. Although both forms are similar pathologically, they differ clinically in their prognosis. Death has occurred in the first variety, but it is in the second form that this outcome is the invariable rule, although many years may pass before the patient finally succumbs.

The first authentic case of calcinosis was reported by Teissier in 1876, but the condition was first reported by Holländer as occurring in 1654. In 1902 Hutchinson described the first case in the English literature. The rarity of the condition justifies the publication of the following case.

CASE REPORT

A married woman was first seen in July, 1943, at the age of 58. Apart from “rheumatism” at 18, she had never had a day's illness until 1937, when, in her 52nd year, she began to suffer from burning pain in the thumb and second finger of her right hand. The pain, which was constant, was aggravated by manual activity and radiated upwards on the volar aspect of the forearm towards the elbow. Within a matter of weeks all fingers of the right hand were affected, and corresponding symptoms had appeared on the left side, but the pain remained localized to the fingers. Walking was no longer a pleasure because of a feeling of heaviness in the feet, while even the slightest exertion caused fatigue. Some months later intense itching of the skin of the upper chest was noted, accompanied by a glossiness of the skin, which persisted after disappearance of the itch a few weeks later. During this period her nails had become brittle and the tips of her fingers bulbous.

Within five months of the onset of the first symptoms, hard white nodules had appeared deep in the pulp of the fingers. These nodules gradually worked towards the surface, causing intense pain due to a local inflammatory reaction. When the overlying skin broke down, the hard central core was discharged, with immediate relief of pain, after which healing took place uninterruptedly. About this time larger masses were seen to have formed over the left patella and right shin, and on the lateral aspects of both heels. While some of these accumulations continued to increase in size gradually, others remained unchanged for months. As these calcareous tumours increased in size and number there was a corresponding loss of weight and of physical vigour.

When first seen, she was a healthy-looking woman of 58, of average height and nutrition, in whom the skin of the face, arms, and legs showed a dark pigmentation. The finger-nails were short and brittle, and the terminal phalanges bulbous and somewhat truncated. Widely scattered in and under the skin of the hands, elbows, legs, and feet were

Calcium Excretion

	Total Calcium Intake	Urinary Output	Output in Faeces	Retained
First 3-day period	2.1 g.	199 mg.	1.2 g.	0.7 g.
Second	2.1 g.	107 mg.	1.18 g.	0.8 g.

many small hard nodules. No abnormality was noted in any other system.

On a diet with a controlled daily calcium intake of 752 mg. the calcium excretion by bowel and kidney was estimated over two three-day periods (see Table). During the first, 0.7 g. was retained, and during the second, 0.8 g. During this time the daily urinary excretion never exceeded 800 ml. Thus it may be that kidney inefficiency played a part in calcium retention, but further investigation had to be discontinued at this point as the patient developed pneumonia.

These studies were repeated and extended some months later by Professor L. S. P. Davidson, to whom my thanks are due for the following facts. The investigation was carried out under complete dietetic and laboratory control

FIG. 1.—Radiograph showing disappearance of terminal phalanges and sclerosis of necks of second phalanges.

FIG. 2.—Radiograph taken in June, 1948.

over a 27-day period. Cortisone was given from the 12th to the 21st day—300 mg. on the first day, decreasing to 100 mg. on the third—but calcium excretion levels were recorded throughout the entire period, the patient having been kept on a constant daily calcium intake. The calcium content of the stool varied so much during the investigation that it is difficult to interpret the results, yet two points of possible significance did emerge: a slight increase in the output of urinary nitrogen and a slight increase in the output of urinary calcium were observed during and after cortisone administration.

It is probable that some of the calcium deposited was derived from the skeleton, since there was radiological evidence of absorption of the terminal phalanges of the fingers—a feature which has not been recorded previously—and some possibly resulted from retention due to kidney deficiency. In spite of this latter possibility there was no clinical or radiological evidence of obvious improvement following cortisone therapy in the doses used.

During the next few years, and in spite of orthodox methods of treatment, the deposition of calcium increased and the condition of the patient deteriorated. Surgical removal of the very painful deposits was the only means by which some degree of temporary relief from pain was obtained. On several occasions masses varying in size from a golf ball to a large turnip were removed from the margins of the anus and vulva, from the perineum, buttock, and sacrum. On one occasion a tumour mass consisting of an extensively infiltrated gluteus maximus weighing over 1½ lb. (680 g.) had to be literally chiselled off the sacrum.

The material removed at operation varied in consistency from a white chalky fluid to hard calcified masses of calcium phosphate and carbonate. The former predominated in the proportion usually found in bone.

Microscopically the swollen fibrous tissue fibres were outlined and rendered prominent by calcific granules, as were the elastic fibres also. The nerves were outlined by a fine granular deposit, but the blood vessels showed little involvement except at one point where a large vessel was surrounded by a chronic inflammatory cell reaction. In those areas in which foci were seen by the naked eye no cellular structure was noted.

By 1952 the patient was bed-ridden, with loss of all voluntary movement in the joints of the hands, arms, feet, and legs. The subcutaneous tissue was minimal, and the skin was pigmented and tightly stretched over the bony prominences. X-ray films revealed widespread and diffuse deposits of calcium in the soft tissue over the nose, right chest, left hand and forearm, and, to a less degree, on the right, both hips and ischial tuberosities, and in the region of both knees, heels, and feet (Figs. 1–3). The terminal phalanges of the fingers (Fig. 1) disappeared and sclerosis of the necks of the second phalanges developed, rather suggestive of a beginning sequestration of the heads.

Serum investigations, carried out on several occasions, did not reveal any marked departure from the normal: blood urea, 20 mg./100 ml.; serum calcium, 11.7 mg./100 ml.; alkaline phosphatase, 5 units; acid phosphatase, 2 units; serum phosphorus and uric acid were normal.

The patient died of pneumonia in June, 1955, 17 years after the onset of calcinosis and 12 years after being seen for the first time. Permission for a post-mortem examination was not obtained.

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REFERENCES

- Atkinson, F. R. B., and Weber, F. Parkes (1938). *Brit. J. Derm.*, 50, 267.
Hutchinson, J. (1902). *Polyclinic*, 6, 307.
Teissier, L. J. (1876). *Du diabète phosphatique*. Thèse de Paris.

FIG. 3.—Radiograph taken in January, 1951.