Medical Memoranda

Calcification of the Thyroid Gland

The following case of calcification of the thyroid is interesting enough to warrant its recording. Few such cases have hitherto been published. According to a survey of the literature, cases of calcification of adenoma of the thyroid have been reported by Bunch (1939), Rambo and Levi (1930), and Pennell (1917). J. J. Clark recorded an instance of calcification of the thyroid (1920).

The case below described is an example of calcification of the right lobe of the thyroid. The stone on removal was conical in shape, with three surfaces, three borders, apex, and base. It measured 2 in. (5 cm.) from base to apex, and was 1 in. (2.5 cm.) thick. It weighed 23 g. when dried. Having made careful search without avail for the remains of thyroid tissue after removal of the stone, and on comparing its shape with the anatomical description of a thyroid lobe, I think the above assumption is justified.

HISTORY OF CASE

A spinster of 76 was admitted to Tyrone County Hospital complaining of pain in the epigastrium with loss of appetite and energy. Investigation revealed a moderate degree of hyperacidity but no evidence of gastric neoplasm. Her blood picture suggested a megalocytic anaemia. About ten days after admission she complained of difficulty in swallowing and also of an obvious hoarseness. On further questioning she stated that her voice had been getting weak for the past six months, but never so bad as at present. Examination revealed a hard craggy mass in the region occupied by the right lobe of the thyroid gland. The mass moved freely on deglutition and on palpation. There was a slight parenchymatous enlargement of the left lobe. A diagnosis of thyroid stone pressing on the recurrent laryngeal nerve was made, and later confirmed by screening and x-ray examination. Operation was advised and carried out through a collar incision under local analgesia. The stone was enclosed in a thin fibrous capsule, from which it was easily removed after cutting some adhesions between it and the ala of the thyroid cartilage. The left lobe was enlarged but was not interfered with.

The patient made an uneventful recovery. The hoarseness subsided after a week or ten days, and she no longer complained of dysphagia. The acute severity of the hoarseness which the patient experienced after admission was thought to be due to her recumbent position, in which the recurrent laryngeal nerve was probably subjected to more direct pressure from the stone.

I am grateful to Mr. A. A. Eaton for permission to treat and publish this case.

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Penicillin in the Treatment of Thiouracil Agranulocytosis

The following report of a case of agranulocytosis occurring during thiouracil therapy is of interest in view of the excellent response to early treatment with penicillin.

CASE REPORT

A woman aged 59 was admitted to hospital on April 1, 1946, with a moderate degree of thyrotoxicosis. Treatment with 0.6 g. of methyl thiouracil daily was started on the 5th. The thyrotoxic condition improved, and on the 23rd the dosage of methyl thiouracil was reduced to 0.4 g. daily. During the period of treatment the white blood cell count ranged between 4,000 and 7,000 per c.mm., with neutrophils between 65 and 72%.

On May 1 there was a purulent discharge from the right ear, but no pyrexia or constitutional disturbance. She had a history of chronic otorrhoea. The dosage of methyl thiouracil was reduced to 0.2 g. daily on May 2. Next day the white cell count was 3,000, and at 11 a.m. on the 4th it was 1,900, neutrophils 4%. Methyl thiouracil was stopped immediately, a total dosage of 14.8 g. having been given. Penicillin therapy was started at once, with 20,000 units three-hourly. In addition, 4 ml. of liver extract was given daily for three days. On the evening of the 4th there was a rise of temperature to 102° F. (38.9° C.), but the patient was fairly comfortable. Next day the temperature was 100° F. (37.8° C.) and the white cell count 1,800, neutrophils 5%. On the 7th the temperature was 99° F. (37.2° C.) and the white cell count 1,800, neutrophils 12%, with a shift to the left noted. The patient felt well. The temperature was normal the next day and the white cell

count was 3,000, neutrophils 37%. Penicillin therapy was discontinued on the 10th, and on the 14th the white cell count was 8,200, neutrophils 69%.

Agranulocytosis may occur as a serious complication during treatment with methyl thiouracil. Reports in the American literature of the success of penicillin in this condition prompted its use in this case. It would seem that penicillin is a most convenient form of therapy for agranulocytosis.

I wish to thank Dr. D. A. Williams for permission to publish this case.

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Reconstituted Plasma Used in an Epidemic of Measles

During the repatriation of ex-internees in a crowded ship from China three cases of measles were discovered. More than half the 202 children had never had measles, and no convalescent serum was available. In an attempt to modify the course of the disease, which was almost certain to spread, it was decided to try the effect of reconstituted plasma by injection.

The dried plasma had been kept at least five months in the Tropics. It was made up to normal strength. The dosage chosen was 10 ml. intramuscularly, and 112 injections were given. As was to be expected, the number of patients fluctuated daily; the majority were seen about 9 to 12 days after the first nineteen cases, and the rest a further 7 to 14 days later. Early in the epidemic isolation became impracticable and was discontinued.

The earlier cases, appearing soon after the injection, were severe; temperatures were high, varying from 102° to 104° F. (38.9° to 40° C.) continuously for 3 to 4 days; Koplik's spots were usually present, and were extensive in distribution. In the later cases the clinical picture had been modified. Pyrexia was mild, Koplik's spots were not so extensive, and the rash in many cases was hardly perceptible. Severe attacks occurred in two children and six adults who had not had an injection; three inoculated cases also had severe attacks. In the remaining cases there was a greater variation in the severity of the disease; the majority, however, had a modified form. Koplik's spots were usually present for four to five days before a mild rash appeared, whereas in the severe cases the time taken was two days. One boy had a severe attack, developing petechiae on arms, legs, and trunk, which faded leaving a coppery staining; he had not been injected.

One case only became complicated, a patient who had received a plasma injection developing acute otitis media at the end of the voyage when the average noon temperature had fallen to 35° F. (1.7° C.). Every patient developing a temperature over 100° F. (37.8° C.) was treated with sulphathiazole by mouth, the daily dosage varying from 3 g. in a 4-year-old child to 6 g. in an adult. During the epidemic 121 cases of measles were seen. Collection of clinical data was difficult under conditions of shortage of staff in a ship where the space and facilities for medical work were limited.

DISCUSSION

Excluding the early ones, there were only three severe cases from the remaining 90 who had received the injection. This fact, and the observation that the attacks were severe in those not inoculated, suggest that the plasma was effective in modifying the course of the measles.

McGuinness *et al.* (1943) showed the efficacy of dried plasma, whereas Stokes *et al.* (1944), Ordman *et al.* (1944), and Greenberg *et al.* (1944) reported excellent results using the gamma-globulin fraction obtained from human plasma. These workers, who used concentrated doses, commented on the low incidence of serum reactions. In the present series only one case of mild serum sickness was seen in the 112 children injected.

Under the crowded conditions and in a relatively unprotected community it was expected that the measles would be severe and complicated. That this was not so is thought to be due to the modifying effect of the plasma, the administration of sulphathiazole, and the ideal weather encountered in all but the latter part of the voyage.

On clinical evidence it was concluded that reconstituted pooled plasma is effective in modifying measles. It was shown that the dried plasma is effective after storage in the Tropics and can be readily made up when required.

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