COMMENT

Tracheotomy in this case of severe mononucleosis was undoubtedly a life-saving measure, and the change in the condition of the patient after operation was remarkable. The administration of intravenous arsenicals was of no avail in reducing the faucial oedema.

A further interesting feature of the case was the occurrence of mild meningo-encephalitis during convalescence. Cerebrospinal manifestations of glandular fever are more widely recognized since Epstein and Dameshek (1931) first drew attention to them, and Landes *et al.* (1941) reported such a case in which the general behaviour was very similar to that of the patient described here.

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Treatment of Bismuth Stomatitis with BAL (British Anti-lewisite)

BAL (British anti-lewisite, 2:3-dimercaptopropanol) has been soundly established clinically as an effective antidote in acute poisoning by the salts of gold, mercury, and arsenic, but a search of the literature has not revealed any report of its application in the complications of bismuth therapy. The following case illustrates the rapid action of BAL in acute bismuth stomatitis.

CASE REPORT

A man aged 34 years attended the Special Department, Ashford Hospital, Middlesex, on January 19, 1948, for continuation of treatment for early generalized syphilis which he had acquired in Manchester 12 weeks previously. He had there received injections of arsphenamine (0.45 g.) and bismuth oxychloride (0.20 g.) at weekly intervals for two weeks.

On examination he had a healing indurated ulcerative erosion on the coronal sulcus near the frenal base, a generalized adenitis, and a fading maculo-papular rash limited to the trunk. There were no condylomata and no specific oral lesions, but a mild degree of pyorrhoea was present, and the second and third right upper molars were carious. The Wassermann and Kahn reactions were strongly positive.

His occupation (lorry driver) and hours of work precluded penicillin therapy for the time being, and the original treatment was therefore continued. After the importance of oral hygiene had been brought to his notice he decided to have dental treatment from his own dentist, whom he attended twice during the period January 19 to March 19, 1948, treatment on each occasion consisting of scaling and cleansing of the gum pockets. The carious molars were not extracted.

On March 18, 1948—i.e., at his ninth weekly attendance at the department and after the eleventh week of treatment—he showed some evidence of gingivitis. In addition, a faint blue

line was present on the anterior lower gum margin adjoining the four lower incisors, and also on the upper gum margin behind the four upper incisors. Bismuth therapy was stopped, but weekly treatment with the arsenical was continued. A mouthwash containing 5% potassium chlorate was prescribed, and instructions given about the care of the mouth. Under this conservative treatment the gingivitis improved, but the blue line persisted. There was no albuminuria.

On April 7, 1948, he again attended his dentist, who repeated scaling and also extracted the two carious upper molars under local anaesthesia. On April 11 (four days later) he attended the department with all the signs of an acute bismuth stomatitis. There was considerable fetor, lividity, and turgid oedema of the alveolar tissues with submucosal haemorrhages, and extensive heavily marked blue lines on the upper and lower gum margins. Heavy bismuth deposits were seen on the buccal and lingual mucous membranes, the soft palate, and the left tonsil, and there was necrosis of the cavities of the extracted molars. A small painful bismuth-pigmented ulcer was present on the buccal mucous membrane adjoining the cavity of the third right upper molar, and he had had a painful, tender bilateral submaxillary adenitis. There was slight pyrexia (99.2° F.: 37.3° C.), oliguria was present, the urine showed a cloud of albumin, and on microscopic examination a few red cells and epithelial casts were seen. The differential blood count showed a mild leucopenia (5,000 per c.mm.) and thrombocytopenia (90,000 per c.mm.). Dark-field examination of the detritus of the ulcer on the buccal mucous membrane revealed masses of *Treponema vincenti* and *Fusobacteria plauti-vincenti*.

Arsphenamine therapy was stopped, and the patient was admitted to hospital. The presence of organisms of fusospirillary type in the mouth was an indication for penicillin, but this was withheld because it was not known if BAL had any effect on the action of penicillin, and in addition the case offered an excellent opportunity to study the unaided action of BAL. Treatment with BAL was begun at once, the preparation used consisting of a 5% solution of 2:3-dimercaptopropanol in arachis oil containing 10% benzyl benzoate. He was given 2 ml. (by intramuscular injection into the gluteal region) thrice daily for two days, twice daily for four days, and once daily for four days, after which (i.e., 14 days after the onset of the complication and 10 days after beginning treatment with BAL) the condition had completely resolved, except for residual alveolar lividity, painful lingual oedema, and intense salivation. The bismuth deposits and the blue lines had vanished.

Local treatment of the complication was entirely palliative, and consisted of frequent cleansing of the teeth, gum massage, and use of a mouthwash containing 1% zinc chloride.

Clinical response to BAL was evident almost from the first day of treatment, and improvement was continuous and rapid. On the seventh day of therapy the urine was albumin-free and microscopically showed no abnormality, and the temperature and differential blood count were normal. Fourteen days after onset of the stomatitis he was discharged from hospital, and seven days later arsphenamine therapy was resumed.

The toxic reactions to BAL were comparatively mild. The patient complained of headache, nausea, a burning sensation in the eyes, lacrimation, and some local pain at the site of injection. Salivation and painful lingual oedema persisted for several days after cessation of therapy. The blood pressure remained constant throughout.

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The Woods School, which is a school for mentally and physically retarded children at Langhorne, Pennsylvania, U.S.A., has been given by its founder, Mrs. W. M. Hare, to a board of trustees. The school was founded in 1913 with the aim of teaching children with behaviour problems and those with reading or speech difficulties to meet the problems of everyday life.