acting insulins; but the new G.Z.I. is a water-clear solution—to my mind, a serious disadvantage. Mistakes between insulins are all too common at present, and I foresee far more if another depot insulin appears on the market, especially if indistinguishable from soluble except for its label. It is difficult for me to understand how a new preparation of such a potent drug as insulin can reach the stage of marketing without serious trial by, and consultation with, the clinicians who will use it. If there is no administrative mechanism for judging and controlling the marketing of new products by their value in practical treatment it ought to be created.

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FAUCIAL AND LABIAL DIPHTHERIA

BY

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Diphtheritic membrane is rarely observed externally on the lip, and the following case, which presents this unusual feature, is deemed worthy of record.

A girl aged 10 was admitted to hospital on Dec. 23, 1942. On the morning of Dec. 21 she had complained of a sore throat and malaise. During the evening of the same day, while chewing a piece of toffee, she inadvertently bit her lower lip. She had no recollection of her lip bleeding. On the morning of the 22nd Dr. Jamieson—her family doctor—was called in. Finding clinical evidence of faucial diphtheria, he took a throat swab, which was reported K.L.B.—

positive next day, when she was sent to hospital. At the time of this examination Dr. Jamieson saw no evidence of labial membrane.

On admission the girl, who was rather undernourished and pale, was moderately ill. There were flea-bites and a few septic spots over her limbs and trunk. Immediately to the left of the midline on her lower lip was a patch of diphtheritic membrane. On eversion of the lip this appeared to be mainly on the upper and internal surfaces. It was quite discrete, oval in shape, and measured about 3/4 in. by 1/2 in. The membrane had a faint yellowish tinge and glistened. It was

thicker in the middle than at the edges. There was a moderate amount of oedema of the underlying portion of the lip, with marked injection of the area immediately surrounding the membrane (see photograph). The tonsils were moderately enlarged and inflamed. Covering the right tonsil was a patch of membrane about 1/2 in. in diameter and a smaller patch was seen on the left tonsil. There was no appreciable fetor, and only moderate bilateral cervical lymphadenitis. An enlarged, slightly tender lymph gland was present in the submental triangle. Examination of the circulatory, respiratory, and central nervous systems revealed nothing abnormal. The left knee-joint was the seat of long-standing tuberculous disease.

Treatment.—50,000 units of diphtheria antitoxin were administered intramuscularly after a serum-sensitivity test which proved negative. Swabs were taken from both lip and throat; from each of these were isolated "gravis" type diphtheria bacilli. The accompanying photograph was taken shortly after her admission to hospital.

Subsequent Progress.—The day following admission the membrane seemed rather thicker, while the edges began to curl away from the lip surface, so that it appeared even more discrete than previously. After this the process of separation continued by a gradual thinning of the membrane as if its surface were being slowly rubbed away, and at the same time by the separation of tiny flakes from the edges, so that the membrane appeared to shrink in extent and thickness simultaneously. That portion of the lip exposed after separation of the membrane was almost "red-raw," and at times a little blood oozed from the surface.

By Dec. 27 separation of faucial membrane was complete, but the labial membrane was still present, although only half its original size. On the 28th a small thin flake of membrane remained on the lower lip, and only slight local oedema was present. On the 31st there was no appreciable diminution in the size of this flake, and it did not disappear entirely until Jan. 2, 1943. The area of the lip affected showed no evidence of injury after complete separation of the membrane. At this time the only abnormalities revealed on clinical examination were occasional extrasystoles. The patient was allowed up on Jan. 12, and was discharged on the 26th.

Comment

In the literature one can find very little reference to labial membrane, apart from direct extension in cases of late severe faucial diphtheria. An authority of such wide experience as Goodall (1928) says: "The writer has twice seen membrane on the tongue, three times on the lips, twice on the floor of the mouth, and once on the gums." Reiche in 1914 (M.R.C., 1923) recorded 49 instances of lesions of the lips among 7,314 fatal cases of diphtheria in Hamburg.

There can be no doubt that in our case the deciding factor was trauma to the lip in the presence of an existing faucial infection. Yet it is evident that, in view of the girl's story that the wound did not bleed, the trauma could only have been slight. It would appear, then, that relatively slight damage to labial mucosa facilitated the inoculation of the bacilli, and it is therefore surprising that labial membrane is not more frequently seen. Carrying the analogy to the fauces, it seems not unreasonable to suppose that Klebs-Löffler bacilli may gain entry to the tonsillar epithelium by virtue of minute traumata—possibly as a result of swallowing solid foods. This supposition may be further borne out by the experience that diphtheria is not often seen in tonsillectomized subjects or even in people with very small tonsils, in whom the lack of prominence would be associated with less possibility of trauma.

Summary

A case of faucial and labial diphtheria is described in which the formation of labial membrane followed a slight injury to the lip. The subsequent progress is recorded. It is suggested, from a consideration of this case, that slight trauma to a tissue may readily facilitate the introduction of Klebs-Löffler bacilli.

I would like to express my gratitude to Detective McHugh of the Gateshead Police for the excellent photograph reproduced herewith; to the bacteriology department of the City Hospital for Infectious Diseases, Newcastle, for "typing" of the causative organisms; and to Dr. James Grant (medical superintendent of this hospital) for granting me permission to publish this case.

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