short-circuit cases back up into the blind pocket, and the only ones that get into trouble are those with a partially obstructed colon from which the solid residue cannot return.

CONCLUSIONS

1. The portal of entrance of the streptococcus, in all the cases of chronic arthritis that I have had an opportunity of studying, is the ileocecal coil; and the stasis in the terminal ileum is the predisposing cause.

2. Drainage of the ileum will cure this infection in a large proportion of cases. The colon will have to be removed as well, if the cecal walls have become infected.

3. The operation as described by Lane is a proper surgical procedure, not necessarily attended with an undue percentage of bad postoperative sequelae, if done in properly selected cases.

4. The operative mortality is not prohibitive.

5. That ileocolostomy or colectomy will effect a cure in a higher percentage of cases of arthritis deformans than any other method of treatment heretofore suggested.

Brockman Building.

ABSTRACT OF DISCUSSION

DR. J. F. PERCY, Galesburg, Ill.: There are two things in this paper that should be noted. First, that infections of the teeth and tonsils may be intestinal in origin and that these easily recognized local conditions may only be a part of a general infection of which arthritis deformans is the most serious expression. Second, the author tells us that he has had no persistent backing up into the blind pocket of the colon causing impaction and no development of a giant ileum. This statement is important because the knowledge of this sequel to an ileocolostomy has made many surgeons hesitate to follow Mr. Lane in his advocacy of this operation. The author also tells us that in order to avoid this impaction there must be no obstruction between the cecum and the point of intended anastomosis; that if there is, the colon must be removed. This point, if true, and we have no reason to doubt it, is most important. In other words, if normal peristalsis is not interfered with, the colon will not become impacted. This simply means that in doing this operation we should see that not only a previously existing obstruction to peristalsis is not left uncorrected, but that our method of operating does not interfere with the physiology which permits the liquid contents of the bowel to pass into the colon in order to be deprived of its water, and when so altered to pass out again through an unobstructed channel. Lane's short circuit, therefore, will relieve a partially obstructed ileum but has no place in an attempt to correct an obstruction of the large bowel.

While visiting Rollier's Sanatorium in Leysin, Switzerland, two years ago, I was greatly impressed with his end-results in what we have heretofore considered utterly hopeless tuberculous joints. His exposure of these joints and of the whole body to sunlight and the open air cleared them up even when involved in secondary infections, and with a movable joint, in a most astonishing way. If this type of tuberculous joint infection will yield to appropriate treatment and become practically normal in function, I am ready to believe that the essentially ankylosed joints of arthritis deformans can again be made movable as is most strikingly shown by the patient exhibited here. This is a subject that will not down. We are all convinced that there is something to it. What we need are papers such as this one and others on the program of this meeting to clear up what is obscure in meeting the indications, not only of technic, but of physiology as well.

DR. M. CASPER, Louisville, Ky.: Did any of these patients have Lane kink or adhesions?

DR. REA SMITH, Los Angeles: Almost all of these patients were operated on before and had marked adhesions and dis-

tinct bands. The patient whom you have just seen had three loops of ileum bound down to the stump of the uterus, which had been removed a number of years before. I have one patient now, being treated with a support, who has as marked a stasis as you saw on the screen, but in whom the intestines are all movable; she has had the same results as though operated on, because she is now getting thorough drainage of the ileum.

LUPUS ERYTHEMATOSUS OF THE
MUCOUS MEMBRANES*

GEORGE D. CULVER, M.D.

SAN FRANCISCO

The cutaneous lesions of lupus erythematosus are so deforming that they occupy the attention of both the physician and the patient to the exclusion of the manifestations of the disease on the mucous membranes. Furthermore, the lesions on the mucous membranes, although generally erosions, and therefore raw surfaces, do not usually give the same discomfort as do, for instance, herpes or mucous patches, and the patient rarely draws the physician's attention to them. They are important, however, as giving one an insight into the nature of the disease as being something more than a mere local cutaneous affection, and they are also important because it is occasionally necessary to differentiate them from other affections of the mucous membranes, especially those occasioned by syphilis. The following eleven cases show lupus erythematosus in seventeen locations on the mucous membranes:

Case 1.—A woman, aged 38, consulted me, July 23, 1909, on account of a lupus erythematosus that had appeared three years previously over the right malar eminence, and that had disappeared, leaving only a slight capillary dilatation but no scar. Just below this, however, there was a scar, the result of another eruptive patch. Other patches had appeared over the frontal eminences and had vanished, leaving almost no trace.

When she consulted me there were six patches on the face, one on the vermillion border of each lip, and two in the right cheek pouch and one in the left. The lesion on the nose was fungating and bled easily; the others were bright red, of irregular shape, and were level with the surface. Besides this the face was mottled with a dirty yellow pigmentation, and she looked in wretched health. The two red superficial erosions in the right cheek pouch and the one in the left were persistent, and at times they became very red and angry looking.

Two months before consulting me she had had a severe carbuncle on the right temple, showing she was subject to streptococcic invasion. Furthermore, shortly before, a baby had scratched her under the right eye, making a wound which was a number of months in healing. There was a history of much tuberculosis in the family, although her immediate relatives, such as her father, mother and sister, were not affected with this disease.

Her tongue had a thick, grayish-yellow coating, and there was some indican in the urine. She slept wretchedly and she suffered from cold hands and feet. For months before the eruption appeared and during pregnancy, she used to take milk excessively: two quarts at night, and large quantities during the day, to the exclusion of almost all other food.

CASE 2.—A religieuse, aged 26, consulted me, May 8, 1912, on account of a most extensive and severe lupus erythematosus of the sides of the nose and of the cheeks. The scarring was typical. She said that three and one-half years previously

* Read before the Section on Dermatology at the Sixty-Sixth Annual Session of the American Medical Association, San Francisco, June, 1915.

two scaly spots had appeared, one on each side of the cutaneous surface of the upper lip. After this an eruption broke out on the inside of the upper lip, forming a running sore. The lip was then so out of shape that she could not speak, and the gums had a white coating.

When she came in, the inside of the upper lip was red and inflamed, the gums were retracted in some situations, redundant in others, and gingivitis was present. The lower lip was prominent, bright red, injected, and frequently had the appearance described by William Dubreuilh¹ of being coated with collodion. During the exacerbations of the lupus erythematosus, of which she had many, the lips, especially the lower one, burned and became intensely inflamed. The exacerbations were intimately associated with disturbances in the general health. At such times the mucous glands emptying on the inner surface of the lower lip swelled and became prominent as rounded elevations. At times a herpetic eruption resembling "cold sores" appeared in this situation, and the gums would redden and feel "feverish." Occasionally raised red blotches appeared on the mucous membranes of the lips. When the blotches were examined with a lens they showed a beautifully characteristic structure. They were about 0.5 cm. in diameter and slightly raised in a pin-cushion form. There was a central erosion, and the rounded border was convergingly striped with bright red capillaries. The epithelium covering this border was faintly opalescent. At one time, Feb. 19, 1914, there were three such lesions, each about 0.5 cm. in diameter, on the red of the upper lip, and one on the lower.

This patient was an irregular, rapid eater. She took much sweet food, potato and cheese. She had a heavily coated tongue and suffered from marked gastro-intestinal symptoms, such as flatulence and distention after eating, sour stomach and constipation. At times she had a ravenous appetite. She also had occasional right-sided headache. The conjunctivae were frequently yellow. As is common in gastro-intestinal intoxication, the whole cutaneous surface was congested with blood. Whenever the general health deteriorated the lesions became much worse. For instance, when she tried to keep Lent, it reacted very badly on her general health and on the lupus erythematosus. The edges of the eyelids were red and sore, resembling blepharitis marginalis.

April 14, 1914, on being examined the mouth revealed three lesions in the right cheek pouch, and one in the left. These did not cause discomfort. In each of them there was a bright red central line, surrounded by an opalescent area, which in turn was situated in a bright red field. All these lesions were above the interdental lines and were not near any roughened harsh surface, as roughened or sharp-edged teeth, such as might have caused an erosion.

The patient told me that at one time it was thought she had tuberculosis. I never found evidence to that effect while she was under my observation.

CASE 3.—An unmarried nurse, aged 42, consulted me, Jan. 29, 1914, for an eruption which had appeared one year before, following sunburn at the seashore at Santa Cruz. There was an irregular light red telangiectatic patch on the left cheek; an irregularly contoured, light red desquamative patch that included the chin and lips and that contained many milium-like bodies; some irregularly contoured, light red, desquamative patches on the right cheek near the eye, and two patches near the right angle of the jaw that were doughy, telangiectatic and simulated an eczema.

There was a red patch with a central erosion, and a surrounding opalescent color in the left cheek pouch. This patch was not circular, but stretched forward along the interdental line. Below this there was an opalescent patch without erosion.

A diagnosis of syphilis had been made on the evidence of the lesions themselves, without any other evidence whatever, and the patient had received two intravenous injections of salvarsan in the previous May and June, followed by hypodermics of sublimate and inunctions of unguentum hydrargyri, with, of course, no result.

She suffered from quite marked gastro-intestinal disturbances, had flatulent dyspepsia, and there was dilatation of the stomach and claptage. She also suffered from constipation, and much gas in the bowels, and the physical examination of the abdomen showed the intestines markedly dilated with gas.

CASE 4.—June 4, 1908, a girl, aged 17, consulted me on account of a "bat wing" lupus erythematosus of the face and reddened bald patches in the scalp. She said the first appearance of the disease was on the left index finger the previous December. The eruption was preceded by a few months of irregular menstruation.

She had erythematous blotches on the roof of the mouth, and there was roughening of the upper gums far back on their inner sides, that is, the sides facing the mouth cavity.

It cannot be asserted unequivocally that the lesions in the mouth in this case were those of lupus erythematosus. It can only be said that they occurred in a patient having this disease, and that they were not herpetic or luetic, or the lesions of lichen planus or of erythema multiforme.

Her general condition was not good. She was markedly anemic, and the skin around the mouth was a dirty yellow. When she first came in her hemoglobin was 49 on the Dare instrument. She had a coated tongue, a heavy breath, and frequently a feeling as of a lump in the stomach. She was constipated.

CASE 5.—A married woman, aged 26, consulted me, April 17, 1909, on account of a raised, light red, desquamating, well-circumscribed lesion that formed a segment of a ring, and was situated on the upper portion of the bridge of the nose and extended to the right. This eruption had begun two years before, when she was suffering from pains and gas in the stomach and abdomen, and when her baby was 6 months old.

On her second visit, May 1, 1909, I became aware of a right-sided rhinitis, best marked on the right side of the septum nasi. The reddened surface was sharply bounded at its lower edge, and below this sharp boundary the epithelial surface was thickened and sodden looking. There was a marked tendency for this surface to crust.

The skin over the elbows was rough, she had seborrhea sicca of the scalp, her nails were slightly brittle, and she had some acne of the chin. The patient was in fairly good health, but she suffered from flatulent dyspepsia, constipation and mucous discharges from the bowels. Her conjunctivae were tinged slightly yellow as with bile. She suffered from muscular pains in the shoulders and arms, and occasionally had temporo-frontal headaches. She was anemic.

During the succeeding winter there was an exacerbation of the lupus erythematosus lesions. About some of them there appeared a bright red margin. At the same time there occurred a scattered papular eruption of the left ear shell, and some pernio-like lesions of the fingers; one of them on the back of the first knuckle of the left index finger was disk shaped. Toward spring all these manifestations either quieted down or entirely disappeared.

CASE 6.—A single woman, aged 30, consulted me, Feb. 25, 1913, on account of lupus erythematosus of the left cheek and of the bridge of the nose. The patch on the left cheek had a bright red border about 2 mm. in width. Within this border the center was scaly and lighter red. The patch had been present for some months, but within the last two or three weeks a red crusted lesion had appeared on the bridge of the nose.

During the preceding summer, and previous to the appearance of the eruption on the face, she had remarked a redness of the lower lids. There was redness and thickening and some crusting of the middle two thirds of the free edge of each lower lid. This was pronounced enough to give her a peculiar expression.

Both lips were dry and scaly, and the lower lip was irritated along the mucocutaneous border. The gums were a little redundant, but otherwise in very good condition.

1. Dubreuilh, William: *Ann. de dermat. et de syph.*, 1901, ii, 231.

The symmetrically patchy circumscribed character of the lesions on the lids, together with their permanency, would be enough to permit them to be classed as lupus erythematosus patches. The condition of the lower lip was not characteristic enough to allow making such a strong inferential diagnosis.

The patient did not complain of any trouble in the stomach at all. Her tongue was coated, and she had been constipated, but at the time of her visit the bowels were regular. There was, however, splashing in the stomach and very extensive hypertympany over the bowels. She slept well, but she had spent three weeks of the previous month in a hospital on account of nervousness.

CASE 7.—A man, aged 40, consulted me, Dec. 29, 1913, for lupus erythematosus lesions of the left side of the upper lip, left cheek, left wing of the nose extending into the nostril, left parotid region and of the inner surface of the right ear shell. The mucous membrane in both cheek pouches far back, opposite the last molars, was affected.

The affection had begun three years previously on the outer surface of the upper lip as a papule, and had gradually spread out over the left cheek and up on the left wing of the nose and into the left nostril. The advancing border of this lesion was so prominent, indurated and of such a deep red as to cause it to be mistaken for many other diseases, especially syphilis. That part of the border which ran along the mucous surface of the left side of the upper lip was quite characteristic. It was a narrow line covered with white, tightly adherent, hyperkeratotic epithelium. The area on the lip and cheek, enclosed by the border, was thickened, rough and scarred, and the upper portion was a dirty buff color. The scarring appeared to be partly due to the disease and partly due to wounds made in extirpating pieces of skin for microscopic examination. The lesion over the left cheek was a large dusky red raised papule with a depressed center. The lesion in the hollow of the left ear shell was covered by a hard, horny, yellowish plate of thickened epithelium, with a pitted surface. All the skin lesions were very tender.

The lesion in the right cheek pouch opposite the last lower molar consisted of a number of soft, smooth, rounded elevations which were not indurated. This field was sharply bounded above by a white line where it came against the healthy mucous membrane. The patch in the left cheek pouch was slightly reddened with no definite border, and there was frequently in this situation, where the mucous membrane was reflected on the gums, a leukoplasia-like whitening of the surface and occasional cracking.

At one time during my observation of this patient he got a red erosion of the mucous membrane of the gums below the lower right bicuspid. This lasted only a couple of weeks, but may have been a lupus erythematosus lesion.

The patient suffered from retracted, easily bleeding gums, a heavily coated tongue, a splashing, dilated stomach and an overloaded lower bowel with very offensively smelling evacuations. The colon in the left inguinal region felt like a thick caoutchouc bar.

The whole integument was passively congested, and the patient's hands were markedly tremulous.

CASE 8.—A woman consulted me, March 14, 1908, on account of a red scaly lesion occupying a large part of the left cheek, and other lesions in the left ear shell, on the tip of the nose, on the right cheek, on the right ear, on the forehead and one below the internal canthus of the right eye that involved the mucous membrane of the lower lid. There was also a split-pea-sized lesion on the vermilion of the upper lip. Although none of these lesions were of a classic type, they were characteristic enough both in their appearance and in their course to permit of a diagnosis being made.

The patient's general nutrition was anything but satisfactory. She was large and fat, and the fat was soft and pulpy. She had a bad breath, heavily coated tongue, and suffered from severe headaches attributable to the condition of the stomach. She had had the fallopian tubes removed, April 14, 1906, and up to one year before she had some unde-

termined trouble in the lungs. Her father, her eldest brother and her cousin had died of pulmonary tuberculosis. Her temperature was generally slightly subnormal, and tuberculin, which was given to her as a treatment, caused no febrile reactions.

The patient's face had always flushed easily from early girlhood, and her present malady had appeared first one year before, as a red lesion on the left cheek. She exhibited still other symptoms of a too mobile vascular system, as whiteness and coldness of the fingers, and coldness of the feet. The eruption improved gradually under a treatment directed to clearing up the gastro-intestinal symptoms. Many of the patches, however, left scars, as is characteristic of lupus erythematosus. New patches of small size and of little induration still appear.

In the spring of 1909 a patch occurred, invading the mucous membrane. This was treated with solid carbon dioxid and disappeared, leaving a slight scar.

CASE 9.—A girl, aged 16, applied for treatment, May 6, 1913. A small red spot had broken out on the external surface of the left lower eyelid one year before, and it began to spread decidedly in October, 1912. When she applied for treatment in May it had invaded the mucous surface of the lid. She also had a patch on the edge of the shell of the left ear. The patches spread as a ring, clearing in the center.

She had a coated tongue with a bright red tip. She had suffered recently from frequent dizzy spells and headache, and occasionally she had wind on the stomach. The stomach was dilated and she had marked splashing. She was constipated. Her feet were always cold.

In the fall of 1913 she had an acute exacerbation in which the eyes were almost closed.

CASE 10.—A woman, aged 30, consulted me, Sept. 13, 1913, for lupus erythematosus which had begun three years previously on the skin at the outer angle of the right eye. The eruption remained confined to this locality for more than one year. Nearly two years after this, a lesion appeared on the right cheek, and a few months afterward another one on the left cheek.

The patient's history previous to the appearance of the eruption was interesting. Just one week before the first occurrence of the lupus erythematosus, she had been operated on for tubal pregnancy. Previous to that she had had an operation for appendicitis; just previous to that for floating kidney, and previous to that she had a curettement. She was subject to migraine that centered particularly in a nerve at the inner canthus of the right eye.

She had a poor appetite. Her tongue was coated, she had a burning pain and much wind in the stomach. She suffered from dizziness and *muscae volitantes*, and she had a tendency to be constipated. She was a poor sleeper.

When she first consulted me, the lesions were light red, markedly keratotic and circinate, and occupied both cheeks and the right upper eyelid, the edge of this constituting in this case the involvement of the mucous membrane. The mucous membrane of the lower lip was very red and frequently cracked, but the condition was not characteristic enough to say that it was part of the lupus erythematosus process.

The patient's general health was wretched, and she frequently had angioneurotic symptoms of the extremities. One morning during the cool weather in March she came to the office with dead fingers, local syncope. A few minutes later some of the fingers, especially the left annularis, assumed the beautiful transparent pale blue color seen in Raynaud's disease. The hands and forearms were violet blue. On this occasion the lupus erythematosus lesions were light red and desquamating, and one of them, situated outward from the left eye, had an active red border.

CASE 11.—A man, aged 67, and of a particularly robust appearance, called on me on account of lesions in the cheek pouches.

The affection began two and a half years previously as a lesion on the left side of the dorsum of the tongue, where there was still a delicate opalescent shade of color. In the

right cheek pouch there was localized superficial desquamative inflammation with white patches of sodden epithelium scattered over the reddened surface. There was a similar, but much less marked, lesion in the left cheek pouch. The lesions were permanent, but subject to acute exacerbations, during which they became extremely annoying from their painful rawness. During an acute attack there was drooling of a brown fluid.

Besides the foregoing, the patient had vitiligo of the back of the hands, prurigenous eczema of the anus and acne of the buttocks. He also suffered from sharp attacks of pain in the cardiac region, which had been diagnosed as angina pectoris, but which were probably due to an immensely distended colon.

There was no history of syphilis; none of the lesions present resembled syphilis, and the blood gave a negative Wassermann reaction.

Under general treatment and diet directed to correcting the bacterial fermentative processes in the alimentary canal, the lesions in the cheek pouches, the drooling and the eczema ani were reduced to insignificant manifestations. The lesion in the right cheek pouch resulted in a superficial but distinct scarring, and the delicate opalescence on the dorsum of the tongue was also probably due to a fine scarring of the papillary layer. This scarring was of great importance from a diagnostic standpoint.

Syphilis, lichen planus, herpes simplex and lupus erythematosus had to be considered in the diagnosis. Syphilis was excluded because of the appearance of the lesions themselves, the absence of any syphilitic history and the negative Wassermann. Lichen planus of the cheek pouches shows a characteristic fine white lacework and white-topped papules that were never present in this case. Besides the characteristic local appearance of lichen planus, there is usually a lichen planus eruption of the skin. None of these appearances were present in this case. Herpes simplex rarely forms a continuous eruption. It usually appears in outbursts more or less widely separated in time. The individual lesions are usually small and cup shaped with a yellow floor, and if they occur in groups, each group will have a microcyclic polycyclic edge.

The persistency of the lesions, the absence of symptoms pertaining to affections for which they might be mistaken, and the production of superficial scarring lead to the belief that this was a case of lupus erythematosus of the mucous membranes alone.

The eleven cases herein reported show lupus erythematosus in nineteen locations on the mucous membranes. The locations were as follows: cheek pouches, five; gums, three; roof of mouth, one; lips, four; nose, two, and edges of eyelids, four.

Nine of these eleven patients were females, a ratio of more than four to one male. They ranged in age from 16 to 67, two being under 20 and two over 40 years of age, leaving seven, a large majority, between the age limits of 20 and 40. These eleven cases were among thirty-eight instances of the disease seen in private practice since April, 1906. All but one of the eleven had typical lesions on the external surface, while in the one exception, Case 11, the mucous membrane alone was affected, the lesions being in the cheek pouches and on the left side of the dorsum of the tongue. The diagnosis in Case 11 may be questioned, though I believe it to be lupus erythematosus for reasons given in the differential diagnosis in the case report.

Excluding Case 11 for the purpose of determining in how large a percentage of typical cases there was mucous membrane involvement, I found over 27 per cent. It is interesting here to note that Thomas Smith²

observed sixteen cases with mucous membrane involvement among fifty-six consecutive cases, more than 28 per cent. All were females. This indicates a distinct tendency for the disease to affect the mucous membranes, and this fact may be of the greatest importance from the standpoint of etiology.

One of the characteristics of lupus erythematosus of the mucous membranes is its persistency. As stated before, the hidden lesions, those of the moist surfaces, are usually erosions which, when not acutely inflamed, are covered with sodden epithelium and bordered by an irregular edge that is but slightly raised and without much character. The patch may have a yellow coating or may be leukoplasic. When leukoplasic it has less character than the leukoplasia of lichen planus, syphilis or that resulting from irritants, such as tobacco smoke. It is definitely patchy without papules, and is unlike lichen planus of the mucous membranes, which is papular, the papules being white topped and grouped if multiple, giving a characteristic fine, white, lace-work appearance. Though of long standing, it is less thickened than leukoplasic areas of syphilis or those resulting from irritants, and it has not the corrugated surface often seen in such white areas. The lupus erythematosus erosion is not all leukoplasic nor always leukoplasic in part. It may be opalescent and not eroded, or may have the appearance of a recent erosion produced by cauterization or other traumatism, except that the edge is more distinct in the acute erosion. It may have a most innocent appearance and not cause any disturbance aside from its constant presence.

Mucous patches of syphilis have bases which are covered with more sodden epithelium and have a dirtier appearance. Other signs may or may not be present. As with any of the persistent mucosa lesions, one has to resort to every means to reach a positive conclusion. Some of the late opalescent specific lesions of the tongue may be closely simulated by lupus lesions. The specific lesions here are usually more thickened and are often fissured. They, too, are persistent, remaining for years without treatment, and even in spite of the old methods of medication, though they will yield delightfully to salvarsan. If there is sufficient doubt in favor of a syphilitic nature, even though laboratory findings may be negative, salvarsan should be administered. Mouth lesions may be especially puzzling when the external lesions closely simulate squamous syphilids, as did those in Cases 3 and 7.

While stubbornly resisting treatment, the condition often shows acute exacerbations. These exacerbations are so definitely associated with disturbances in the general health, particularly derangements of the gastro-intestinal system, that one must carefully consider the importance of this in the etiology of the disease. A small area of affected mucous membrane may persist for months without treatment, and even with treatment, both local and internal, may be as unyielding as are some of the external manifestations of the disease. Often when the lesion is nearly healed and all is progressing favorably, some constitutional disturbance will supervene with a coincident sudden reversion. In this respect, these exacerbations bear a close resemblance to herpes simplex with this notable difference, that the individual lesions in herpes quickly and completely disappear, even in those cases in which the attacks are subintransient and therefore continuous.

2. Smith, Thomas: Mucous Membrane Lesions in Lupus Erythematosus, Brit. Jour. Dermat., February, 1906, p. 59.

whereas those of lupus erythematosus improve more slowly, and tend not to disappear, or do so with the utmost deliberation. It is not uncommon to observe the occurrence of herpes simplex affecting the mucous membranes of patients under treatment for lupus erythematosus of the skin or of both the skin and mucous membranes. The lesions of herpes are usually easily distinguishable from the older disease, as the edges show a more acute inflammation, the borders being congested and reddened; and though in acute exacerbations of lupus erythematosus the lesions may have as deeply reddened and prominent borders, there will not be the cup shape, nor will groups have the microcyclic polycyclic edges such as are seen in herpes. In healing, herpes lesions do not leave scars, whereas one of the characteristics of the other disease on the mucous membranes as well as on the skin is its scarring.

When on the vermilion of the lips the lesions are painful, especially during an acute exacerbation. W. K. Sibley³ mentions this in reporting a case with an active lesion present on the vermilion of the upper lip, which was very painful, whereas the condition inside the mouth had not caused much discomfort. In the four instances mentioned in the case reports of this paper in which the vermilion of the lip was affected, there was an appearance of being coated with colloidion, as mentioned in Case 2. This was the best example of this phenomenon in this group of cases, and was accompanied by the greatest discomfort.

Since having attention drawn to the gums of patients with lupus erythematosus, I have observed that only exceptionally are the gums in good condition. A history of easily bleeding gums is common. Gingivitis is almost constantly found. Redundancy or retraction is often marked, and the teeth are usually bad. The conditions are so constant as to point definitely to long-continued antecedent gastro-intestinal derangements which have reacted on the gums and teeth. This would seem to be a point of some importance, which, associated with the not infrequent presence of more characteristic affections of the mucous membranes, should direct the attention of the observer to digestive and assimilative faults of long standing as most probable causative factors. The fact that acute exacerbations frequently occur associated with acute or subacute digestive disturbances would also point to an intimate dependence of the disease on toxemias of gastro-intestinal origin.

One of the most interesting conclusions reached by a careful observation of all the phases of lupus erythematosus of the mucous membranes is that the lesions are the result of a general disease. The manifestations on the mucous membranes and on the skin as well are only symptoms of a deeper pathologic condition. The foundational disturbances undoubtedly vary in different individuals, but, with the cases considered in this article, the evidence pointing to digestive and assimilative faults is weightiest of all. These faults are such long-standing ones, having become so thoroughly habitual, that their eradication is accomplished only after long and persistent efforts. The difficulties encountered in correcting the faulty conditions would partly explain the stubbornness which is characteristic of the disease in yielding to treatment. Not only the resistance to local treatment, but also

the recurrences and the appearance of new lesions for a long time while treatment is in progress, can be more easily understood with this point in view. Furthermore, as important as any conclusion is the one that internal treatment and a proper regimen are as necessary as is local treatment for the cure of the patient.

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ABSTRACT OF DISCUSSION

DR. JOSEPH ZEISLER, Chicago: For many years I have been not only embarrassed but severely mortified by the rebelliousness of cases of lupus erythematosus against all of our therapeutic efforts. I say "all" because if we are enthusiastic about one or the other of modern treatments, sooner or later we will find it will fail. We must still admire the wisdom of Kaposi, who said that cases of lupus erythematosus will get well in spite of the worst treatment, and again they will resist our best treatment. Freezing, which we thought for a time was not only the newest but the best method, will sometimes fail us. The beneficial effect is sometimes temporary.

Radium, in favor of which much is said, may cause violent reactions. It is in this sense that I look on Dr. Culver's treatment as an important contribution, in bringing out the internal aspects and treatment of these cases. I believe we must make as careful a study of each case as we can from a symptomatic point of view, and try to find a course of treatment congenial to that. It will not, therefore, always be the same treatment which we should use.

I believe we shall have to include lupus erythematosus with those diseases which perhaps are produced by a disturbance of the internal secretions. That does not militate against the view just expressed by Dr. Culver, as we know there are some secretions eliminated from the intestinal wall which have a bearing. I will try in future to treat my cases on the idea that there is some disturbance of the internal secretions which we must try to overcome by employing various organotherapeutic methods.

DR. EVERETT S. LAIN, Oklahoma City: My experience in roentgenology has been a valuable aid in the diagnosis of many skin eruptions. My curiosity or interest was excited in this subject, first, by empirically treating urticaria with the vaccine of the *Bacillus coli communis* and noting the prompt response, sometimes in one or two hours, in cases which had been resisting all treatment for a week or several days previously. Next, when I heard a most interesting discussion by Dr. Rosenow last May in Chicago, I came home and began treating by Roentgen ray the teeth in cases of erythema multiforme and other diseases which have been classified as having an idiopathic etiology. I have now, to my mind, some very interesting observations, which, if borne out in a sufficient number of cases, I believe will throw further light on this subject. I believe when we begin to study more closely the focal or internal infections, the same as is being done by the internists with rheumatism, we, too, shall be wiser. The dentists are curing many things by treating the teeth. They are really curing some cases of so-called rheumatism.

DR. J. B. KESSLER, Iowa City, Iowa: Some of the cases of mucous membrane eruptions are difficult to diagnose. A recent case was that of a woman, probably 21 or 22 years of age, who had a pustule on the under lip, extending over on to the vermilion border of the mucous membrane. I examined my patient and did not find any enlarged glands, although this was important. A histologic biopsy was made, and our microscopist thought it was more like tuberculosis. The first Wassermann test was one plus, and the second was two plus. That did not help me. I could not make up my mind that it was syphilitic. In the past we worked without Wassermann examinations to help us out, and so we treated our patients on the line of the textbook teaching of the past, namely, to give a trial of mercury when you do not know what else to do. We started first with hypodermic injections of mercuric chlorid. Giving her a rest

3. Sibley, W. Knowsley: Brit. Jour. Dermat., March, 1914, p. 101. In connection with this case report a complete bibliography is given.

from those injections, I employed increasing doses of mercury protiodid. I thought I would return then to the other and the local applications of mercury ointment. To my surprise, before I could get back to the hypodermic injections my patient's lip had improved, and in a couple of weeks it had recovered. I am still at a loss to know whether I had a syphilitic case or not. This was a married woman, with no history of syphilis on either side, but she had worked in a button factory, and there many of the people had sores on their mouths and on their fingers. Now, the point is, could there be syphilitic eruptions without enlarged glands?

DR. W. A. PUSEY, Chicago: If I followed Dr. Culver correctly, he said only one of his cases was practically confined to the mucous membrane of the mouth and lips, and in that case he modestly left the diagnosis open. I have seen several cases of erythematous lupus in which I had no doubt of the diagnosis and which did not spread outwardly to any considerable degree beyond the vermilion surface of the lips. I believe Dr. Culver has done well to call attention to the occurrence of these cases of erythematous lupus on mucous surfaces, and to the possibility of the disease being confined entirely to the buccal mucous membrane. I value highly his comments on the internal factors on the causation of erythematous lupus. To my mind erythematous lupus belongs in the group of toxic dermatoses—in the erythema multiforme group. I have seen erythematous lupus lesions on the face in association with erythema multiforme on other parts of the body, particularly on the hands and forearms. I recall one case of a tuberculous woman with typical erythematous lupus on the face who had lesions on the hands strikingly suggestive of Raynaud's disease. To my mind erythematous lupus is not the expression of a specific intoxication, but runs the whole gamut of intoxications from chronic infections like tuberculosis to such intoxications as come from intestinal absorption. And in searching for the cause of the cases we have to take into consideration all the possibilities of internal intoxication. I would like to emphasize what Dr. Zeisler said about the futility of any single local application in erythematous lupus. We can get benefit from many of them, but we cannot be sure in a given case of benefit from any of them. I do not use radium in erythematous lupus, and very rarely now do I use the Roentgen ray. I have been disappointed, like Dr. Culver, in carbon dioxid snow in erythematous lupus, and I have in a few cases seen it much abused by overfreezing with it. At the present moment I am inclined to believe that vigorous treatment with ultraviolet light is giving me better results in erythematous lupus than anything else I have used. It is a method causing some temporary discomfort, but free from danger.

DR. DOUGLASS W. MONTGOMERY, San Francisco: It is of course admitted that the etiology of these cases is obscure; although we think we have a right to assume that the disease is due to a toxin located in the gastro-intestinal canal, we know neither the toxin nor the exact place of its origin. The improvement in almost any case is slow. There are two situations in the alimentary canal particularly liable to infection: one the stomach, which is a sac; and the other the second stomach, the cecum, which is also a sac. When the eruption slows down to the very chronic state, then we do get good results from the use of carbon dioxid snow. It acts as a strong revulsive, and gives the eruption the last kick to kick it out. We have, however, given up the use of the carbon dioxid snow during the acute stage.

DR. A. RAVOGLI, Cincinnati: I have spoken already in other meetings on the etiology of lupus erythematosus. For me, from the clinical observation and the reaction to the tuberculin, there is no doubt whatever of its tubercular origin. I have seen lupus erythematosus limited to the mucous membranes, and I have seen lupus erythematosus of the mucous membrane associated with lupus erythematosus of the skin, and some of the cases ended with general tuberculosis. I am now using as treatment—and with very satisfactory results—the cataphoresis method. Take the

negative pole of a galvanic current and attach it to a little tampon saturated in 10 per cent. solution of zinc chlorid and apply this on the patch of lupus erythematosus, placing the other pole in the hand of the patient, for ten or fifteen minutes of current. The zinc chlorid, together with the action of the cataphoresis of the electrical current, produces an induration of the patch which lasts for something like twenty-four hours, and then gradually disappears. From that method I have seen very beautiful results. Together with this application, sometimes, when the little nodules begin to break down, I touch them with compound solution of cresol; and in four or five weeks I have seen satisfactory results. A case of lupus erythematosus of the tongue in the form of rings, without a manifestation of the lupus erythematosus of the skin, associated with hypertrophy of the submaxillary glands, healed up by touching it twice a week with compound solution of cresol. This application produces some temporary pain, but this is relieved immediately by touching with alcohol; touch it with compound solution of cresol, keeping it there as long as the patient can stand it, and then wash it with alcohol.

DR. A. J. MARKLEY, Denver: I have had the opportunity of observing a large number of patients in the sanatoriums about Denver and Colorado Springs during the past six years and I can say that in these institutions lupus erythematosus is a rare disease. These cases represent all types of tuberculosis in not only the incipient but the most advanced stages, yet lupus erythematosus occurs most infrequently in Colorado and such an experience, if it means anything, points against any direct connection between the two diseases. I have, however, seen one brilliant result from tuberculin in a case of rapidly developing lupus erythematosus in a woman with no physical manifestations of tuberculosis; the condition cleared up rapidly under injections of tuberculin.

DR. H. H. HAZEN, Washington, D. C.: I think we must be careful in our cases, for with a very large percentage of all adults we find there a strong positive reaction to the tuberculin. I think the Austrian army people found that 60 or 70 per cent. of all the men who came up for examination gave a positive reaction. A number of years ago at the Phipps Clinic at Johns Hopkins we found that all the adults connected gave a very strong positive von Pirquet reaction. I do not think we can say that the cutaneous test means anything in adults. Even von Pirquet himself admits that it is too delicate.

DR. ERNEST DWIGHT CHIPMAN, San Francisco: The point emphasized in the discussion, that in lupus erythematosus the infection is not necessarily constant and specific, appeals to me strongly. It seems probable that we shall trace the origin of obscure dermatoses more and more to various infections. I recall a case of lupus vulgaris in which I was persuaded to inject a substance of rather uncertain composition, now called a phylacogen. Within forty-eight hours there appeared a typical zoster reaction along the course of the neighboring nerve. Some time ago, in dealing with an herpes progenitalis, I sought in vain a focal infection along the urethra. Later the same individual was found to be suffering with chronic appendicitis, a source which I had neglected to explore. This man has had no recurrence of his herpes since the removal of the appendix.

The Child and the Community.—It is the duty of the community to protect its children from prolonged labor in mill or factory. That the growing child should be subjected to the strain of long hours of the grinding monotony of factory work is a short-sighted policy for the community, as well from an economic point of view as from a humanitarian one. The child of today makes the community of tomorrow, and whatever the physical, mental and moral education of the child is now will be reflected in the character and standards of his day when he transmutes his present training into action.—E. O. Otis, M.D., paper read at Seattle meeting of the National Association for the Study and Prevention of Tuberculosis.