November 20. Breathing natural.

November 28. Aphthæ of tongue.

December 1. Otitis media, which has existed for several days, has ended in perforation of left drum-membrane.

December 10. Last traces of aphonia of cough now gone.

December 12. Double pneumonia, which underwent resolution in about a week, when a boil formed in left ear and broke.

January 8, 1886. Still considerable cough and discharge from left ear.

The above case I am now inclined to consider one of chronic catarrh, beginning in the larynx and trachea, ascending into the nares and middle ear, and descending into the bronchioles and air vesicles, and the improvement following the use of the digesting spray was probably only a coincidence.

Case 15.—Julia K., æt. 1 year, scrofulous child, has been sick a good deal, almost dying of enterocolitis last August, living in the basement of a damp house. On morning of November 18, 1885, during cold, wet, foggy weather, was suddenly taken with hoarseness, which became worse by evening, with some stridulous respiration. Still worse on following morning, but quite well again in the evening. Worse again on morning of the 10th, and in the evening of same day I first saw the child. Cry and cough devoid of all sound. Had a suffocative attack in my presence, and I thought I could hear a loose membrane flapping in the larynx. Dyspnœa not very severe in intervals between these attacks. Retraction of lower ribs and xyphoid cartilage very slight. White membrane on posterior wall of pharynx. Little, if any, glandular enlargement. Cannot nurse well. Prescribed pilocarpin mur. gr. $\frac{1}{8}$ q. h., with tr. ferri mur., and an initial dose of gr. v calomel. Spray of ext. pancreatis was kept up continually, and child slept well, breathing almost noiselessly until, at 5 A.M., the suction-tube of atomizer became stopped, and by 10, at my visit, the child was again in about the same condition in which I had left it the night before. In the meantime it had nursed without apparent difficulty. I cleansed the tube, but after I left it soon became clogged again, and at 5 P.M. dyspnœa was extreme, with deep recession of xyphoid cartilage, cyanosis, apathy, child lying with its head strongly extended, as in opisthotomos. Respiration 48, pulse very frequent and feeble. The medicine had been given in only one-third of the intended doses. The child's mouth was now held open with a spoon, and the spray used continually by myself for an hour, at the end of which time respiration seemed much moister. Tracheotomy not allowed. The parents kept up the spray until 8:30 P.M., when the child died quite easily, apparently of asthenia, twenty-four hours after the beginning of treatment.

Case 16.—Fannie T., æt. 6 years, began to have sore throat on morning of December 5, 1885, a severe snow storm having occurred on previous evening. Better on 6th. Went to school on 7th. Very slight hoarseness on evening of the 8th. When I first saw patient on 9th, at 10 A.M., there was complete aphonia, breathing was beginning to be stridu-

lous, and there was some inspiratory recession of free border of ribs. Pulse 120. Small spot of diphtheritic deposit on left tonsil. Ordered salt pork to be tied around throat, and gr. $\frac{1}{4}$ pilocarpin mur. to be given every hour, after an initial dose of grs. x calomel. The pancreatic spray was used so diligently that by 7 P.M. $2\frac{1}{4}$ quarts of the solution had been atomized. Respirations were then 28, pulse 132. Considerable perspiration, ptialism, and some vomiting. Had eaten some potatoes and squash for supper. Almost incessant cough, for which gave gr. $\frac{1}{6}$ pulv. opii. By 8:30 P.M. pultaceous deposit had spread over whole of left tonsil. Pulse 160, respiration 40. Discontinued pilocarpin. Calomel has operated several times. Thought I heard a creaking inspiratory râle, which to me indicated extension of the disease into the bronchi. Little cough; sleeps by snatches.

Dr. J. H. Lewis was called in consultation. Calomel gr. $\frac{1}{4}$ q. h. Brandy 3 j, and quinia sulph. gr. ij q. 2 h. Inunctions of oleate of mercury over larynx q. 2 h. Room to be filled with steam by immersing red-hot flat-irons in vessels of water. Spray to be used for a minute every fifteen to thirty minutes, patient breathing through mouth. Tracheotomy not allowed. Was called at 1:10 A.M. and found patient asphyxiated, unconscious. Died quietly in a few minutes, fifteen hours after beginning of treatment, and five days after first symptom of sore throat.

Having given a sketch of the cases treated, and recognizing the imperfections of which I was guilty in their observation, I would like to urge physicians to give the digestive ferments a fair trial in conjunction with such other treatment as the individual cases may demand. If it would seem impossible for the extract of pancreas or trypsin to have any solvent action in the small quantities inhaled in this way, how much more inert must be the lime-water spray used in the same manner, and if the former be not more active than the latter, it has at least the virtue of being equally harmless. Should any one, stimulated by this report, devise a readier means of bringing the digestive fluid in contact with the false membrane, making the method applicable also to fulminant cases, and doing away with the reckless and dangerous doses of mercury now in vogue, the object of this paper will be accomplished.

Dubuque, Iowa, January, 1886.

LUPUS VULGARIS.

Read before the Chicago Society of Ophthalmology and Otology, on December 14, 1886,

BY LYMAN WARE, M.D.,

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History.—Lupus vulgaris is no new disease, but on account of its frequent occurrence and, until the past few years, its almost incurability, I beg to call the attention of the faculty to a few cases which have come under my observation. Before referring to the history of these cases or submitting to your examina-

tion two or three patients who have kindly consented to appear before you, I would, in a few words, recall to your minds some notable features of this disease:

There is no doubt that the disease was generally recognized at least 500 years since, and designated "lupus." That in many cases it may have been confounded with carcinoma, by ancient writers, is highly probable. Willan was the first to apply the term lupus exclusively to certain forms of ulceration about the face. Bateman made no actual distinction between the effects and course of carcinoma and lupus, except that he considered the latter cured by arsenic, the former not.

Symptomatology.—Lupus varies much in appearance, according to the age of the patient, constitution, state of health, kind of diet, and the part affected. At first it appears in the form of tubercles, either isolated or in groups, which may be deeply imbedded in the true skin, beneath it, or quite superficial, and always spreads by infecting the adjacent skin. It is never congenital, though it may appear early in life. Unchecked by treatment it increases more or less steadily for many years. At times the disease may appear checked for years, when it will again break out with renewed vigor. In old age the severity of the disease is often diminished. Lupoid tubercle may terminate either in involution, leaving the skin atrophied and glistening like a scar, or in disintegration and ulceration.

It may occur anywhere upon the body, although most frequently, by far, upon the face. The cases which have come under my observation have originated on the lower lid, extending gradually to the eye and nose. Lupus of the *alae nasi* and the tip of the nose assumes the dissiminate form. The tubercles are prominent, and coalescing, form large, irregular protuberances. Lupus on the lower lid produces, first, complete ectropion, in consequence of cicatricial contraction of the skin; then gradually extends to the palpebral conjunctiva, the ocular and deeper tissues of the eye, involving at last the entire orbit. As the disease involves the conjunctiva it imparts to it a dark, reddish-brown color, and is decidedly trachomatous in appearance; later it becomes smooth, glistening and atrophied.

Etiology.—Many theories have been advanced respecting the cause of lupus. Both ancient and modern writers refer it to scrofula or syphilis. Although the terms scrofula and scrofulous have been used for ages by physicians as well as by laymen throughout the entire world, it must be confessed we have no very clear idea as to what scrofula is, or to what exact condition scrofulosis should be applied. In my younger days I was taught that scrofula, being a literal translation of the Latin *scrofa*, swine, was a disease common to those who eat pork. I have since thought that such an explanation was unfounded, and that the term "scrofula" originated in the fact that the submaxillary furrow, which does not exist in well-fed swine, was obliterated by glandular enlargements. Some who hesitate to use the word scrofula, designate exactly the same condition by the term "struma," or "strumous diathesis."

Although we may not be able clearly to define the

term "scrofula," or "struma," yet in a case of indolent swelling of the lymphatic glands, large lips, flabby, soft muscles, with a feeble constitution, and where the slightest irritation produced chronic inflammation, followed by suppuration, we would not hesitate to designate such a condition as scrofulous, or strumous. In most of the cases that have come under my observation such a condition was not present, nor was there any history of syphilis. Some writers, while not considering lupus a syphilitic disease, think that it shows a syphilitic taint, yet I was not able to discover a single symptom that pointed toward hereditary syphilis. The patients generally were in excellent health, appetite and digestion good. The more I compare the two conditions the less resemblance I find. Lupus is an exceedingly chronic, indolent disease, arising from small tubercles imbedded in the substance of the skin, does not become rapidly worse, may persist for years without producing constitutional disturbance, and is wholly unaffected by anti-syphilitic treatment. It is also essentially a disease of early life, seldom making its appearance before the third year and hardly ever after the twentieth or twenty-fifth. When it appears later, it will generally be found to be a recurrence and not a primary attack.

The treatment of lupus rather indicates that it may be allied to the malignant diseases, a connecting link, as it were, between the non-malignant and the malignant.

Volkman has recently laid great stress upon the fact that every portion of the diseased tissue should be most thoroughly eradicated by the scoop, and the same thing has been taught and attempted for many years by means of the knife, the caustic, or the galvanocautery. It has long been insisted upon that whatever method be adopted it must be thoroughly and unflinchingly carried out, and repeated, if necessary, from time to time, according to the exigencies of the case, or its tendency to relapse. Most authors have considered it necessary to treat the disease locally, some by constitutional remedies only.

In the cases reported I have tried each method separately, then unitedly, and have no hesitancy in saying that when the local treatment was combined with proper internal medication, the advance toward recovery was much more rapid and satisfactory than when only one method was followed. The internal treatment consisted principally of tonics, as quinia, iron, strychnia, phosphates, and particularly arsenic, either in the form of arsenious acid or Fowler's solution, and special attention to a plain, nutritious diet, and out-door life. The local treatment consisted in the complete destruction of the existing lupoid tubercles, in whatever state of development, by means, first, of the scoop, or Volkman's curette; then by a thorough and prolonged application of pyrogallac acid in crystals.

In some cases, after removing the superficial layer, consisting of morbid products, scales, secretions, etc., a pledget of absorbent cotton was saturated in a four per cent. solution of cocaine and firmly held on the diseased tissue. In other cases, where the lupoid tubercles were deeply imbedded or where the disease

was at all extensive, general anæsthesia was first induced. The patients never complained so much of the acid application as of the curetting or scooping out of the lupoid mass. The pyrogallic acid uniting with the blood and lupoid tubercles, produces a thick, brownish, syrupy substance, and as long as this is produced the acid should be applied.

Jarisch, of Vienna, was the first to call the attention of the medical profession to the local use of pyrogallic acid, though it had long been used in the arts, particularly in photography. Dr. A. Vesey (*Dublin Journal Med. Science*, 1878), observing its remarkable astringent effects on the hands of those engaged in photography, was led to employ it in internal hæmorrhage, and especially in the hæmophysis of phthisis, in which he found it very efficient in grain doses frequently repeated (every hour or oftener.)

Jarisch first used it in the form of a ten per cent. ointment, with vaseline. Besnier, of Paris, makes use of a saturated solution of the acid in ether, applies it with a camel-hair pencil to the diseased portion, and at once covers this with a layer of traumaticine. These applications are repeated until the disease is thoroughly eradicated.

Schrummer, of Buda Pesth, after destroying the lupoid tubercles by means of the ten per cent. ointment already mentioned, prevents a return of tubercles in the cicatrix, which is of frequent occurrence, by the application of mercurial plaster.

In some few cases in which pyrogallic acid has been used extensively and long-continued, poisoning has resulted; but when its use is restricted to the removal either of lupus or epithelioma, it is not at all likely to be complicated by any such unpleasant result. In cases of poisoning the kidneys are first affected, prostration and febrile disturbances appear, the urine becomes brownish or olive-green in consequence of hæmoglobinuria, the skin tinged with green, and a glairy mucus is vomited.

Dr. Charles W. Allen, of New York, has reported a number of cases of lupus treated by pyrogallic acid, and has expressed himself as most pleased with its effect. He made use of both the powder and ointment of varying strength, made with vaseline. He considers the acid of great value because it specially attacks the lupoid tubercles, induces destructive ulceration in and about them, leaving the healthy tissue unchanged.

In any preparation of pyrogallic acid care must be exercised not to combine it with an alkali, which would neutralize it; nor with a metal, which it would reduce.

Six cases have been treated, but in Case 1 iodoform in powder was used instead of pyrogallic acid.

Case 1.—Jas. M., æt 45 years. Was first attacked twenty years since while in the U. S. Army. The disease made its appearance at the inner canthus of R. eye. He attributed it to an injury received while riding under a tree and being hit by an overhanging limb. The disease gradually extended to the under lid, involved a portion of the upper, encroached upon the cheek, and finally the deeper tissues of the eye itself. The patient was given ether and the dis-

eased mass thoroughly removed by means of the curette, and the wound dressed with powdered iodoform. Two weeks subsequently, a few lupoid tubercles again made their appearance at the inner canthus, but were easily removed by the curette without anæsthesia. The patient made a rapid recovery, and remained under observation about six months, and no relapse occurred. He assured me on leaving, that should there be a return of the disease he would surely let me know. He was placed from the first upon Fowler's solution of arsenic and advised to continue its use for at least six months.

The cuts shown give a good idea of the appearance of the case before and after treatment.

Case 2.—F. W., æt. 50., stone cutter; residence 441 Desplaines St., Chicago. Twenty years since a small tubercle about the size of a pea made its appearance upon the left ala nasi. It slowly increased until it attained the size of a large bean, ulcerating and extending at its edges. A few years later lupoid tubercles appeared at the inner canthus of the L. eye, and gradually extended to the lower lid.

Mr. W. had submitted to a great variety of treatment, which had only partially kept the disease in check. When he came under observation the protuberance on the ala nasi was, at least, the size of a large lima bean, dark-red and ulcerated at the edges. The ulceration at the inner canthus occupied an irregular space, about the size of a ten cent piece. Although there was at least an inch of perfectly healthy skin and tissue intervening between the two, the patient was confident that there was some connection between them. When the ulcer of the nose was red and painful that of the eye was also worse. As the patient had considerable fortitude the lupoid tubercles of both nose and eye were thoroughly curetted without the aid of ether, and the pyrogallie acid applied until the brownish syrupy substance ceased to form.

The history of this case differed somewhat from the others, in this respect, that for years there had been more or less pain. In fact, of late, the pain had been so great that it was impossible for him to work at his trade or sleep, sometimes for several nights in succession. The operation relieved him completely of the pain and he was able to sleep, and returned at once to his work. Several operations have been necessary, but he has been able to sleep regularly and work constantly, and at the present time he appears to be completely cured.

Case 3.—Minnie —, æt. 16. The lupoid ulceration first began when she was 12 years of age, unaccompanied by any pain. When she first came under treatment, the entire upper and lower lids and about one-third of the adjacent cheek were involved. Ether was administered, the entire ulcerated surface was curetted and the acid applied.

This case being at the Illinois Charitable Eye and Ear Infirmary, and my term of service about expiring, came under the charge of my colleague, Dr. Gardner, who continued the same course of treatment. After remaining a month or two in the institution, and no indication of the disease reappearing she was allowed to return to her home. Six months have now elapsed and there has been no return of the disease, but as there is slight ectropion of the lower lid, in consequence of the deep ulceration, a plastic operation will be necessary to restore it to its normal condition.

In all cases of lupus about the eye, I have considered it prudent to protect the cornea from the action of the acid, by means of a thick layer of absorbent cotton.

I have now used the pyrogallie acid in five cases, and in three or four very extensively and freely, yet in no case have I seen any symptoms which would indicate poisoning.

MEDICAL PROGRESS.

SEROUS CYSTS OF THE ORBIT.—At the meeting of the Académie de Médecine on December 14, M. PANAS read a communication on "The Pathogenesis of so-called Serous Cysts of the Orbit." The greatest obscurity has hitherto attached to the nature and pathological signification of these cysts. After a careful consideration of the subject M. Panas draws the following conclusions:

1. These cysts, without exception, are of congenital origin, even when their presence is not manifested until an advanced age.

2. They present seats of election, corresponding with the bronchial clefts of the embryo.

3. Their contents (epithelium, hairs, teeth, solid or liquid fat) may vary without the dermoid origin being doubtful, and this is due to the histological constitution of their walls.

M. Panas gives the record of an interesting case, with a full histological account of the cyst.—*Bulletin de l'Académie de Médecine*, No. 50, 1886.

DOUBLE PNEUMONIA TREATED WITH PILOCARPINE.—A man æt. 18, who had been greatly broken down with dysentery complicated with nephritis, suddenly acquired a double pneumonia. Antipyretics, expectorants, etc., resulted simply in a fresh lighting up of the dysentery. As in this way the organs of secretion as well as those that regenerate the blood became unfit for their work, uræmia and asphyxia combined threatened to set in, and to combat at least one of these dangers, recourse was had daily to hypodermatic injections to 0.1 gm. of pilocarpine. Thanks to the profuse perspirations and the salivation, purification of the blood was in this wise obtained until the lungs were again able to do their work. Improvement became more pronounced after every injection, and patient recovered in a very short time. With like good effect this drug was used in the case of an old lady sick with broncho-pneumonia, with intense dyspnoea.—*Memorabilien*, Hft. 4, 1886.

TREATMENT OF WHOOPING-COUGH.—The following method of disinfection of sleeping and dwelling apartments and clothes is recommended by M. MOHN in the treatment of whooping-cough. It is said to cure the cases immediately. The children are washed and clothed in clean articles of dress and removed to another part of the town. The bedroom and sitting-room or nursery are then hermetically sealed; all the bedding, playthings, and other articles that cannot be washed are exposed freely in the room, in which sulphur is burnt in the proportion of 25 grammes to the cubic metre of space. The room remains thus charged with sulphurous acid for five hours, and is then freely ventilated. The children return the same day, and may sleep and play in the disinfected rooms.—*Lancet*, Dec. 18, 1886.

STERILITY FROM TEA-DRINKING.—DR. DAVIS (*Therap. Gaz.*) states that tea-drinking acts in the direction of producing sterility in females.