been at times administered would astonish any one accustomed only to the ordinary dose of a few grains, as commonly prescribed. In certain rare and neglected cases, where grave nerve lesions from syphilis threaten life, such doses, running up into many hundred grains of the iodide of potassium daily, have undoubtedly saved life, and may be necessary; the remedy certainly should be pushed to the fullest extent possible when occasion seems to demand.

But, on the other hand, I am convinced, from not a small experience in syphilis, and from the results in my share of grave and threatening cases, that these exceedingly large doses are rarely if ever required, provided that other means are intelligently and judiciously employed; in other words, I believe that even in the latest stages of syphilis, and in its gravest manifestations, a certain amount of mercury will certainly aid in overcoming the disease and in removing the lesions. I know full well that in certain cases, and at certain times mercury will not be well borne, and the system will seem even to become lowered under its use: but there are very rare instances, and if combined with proper bitter tonics and iron, mercury can be borne and will aid in the treatment of all stages of syphilis. But, of course, it must be used carefully and judiciously in those of broken down habit, and often other remedies, mineral acids, etc., are required to secure the best results.

My more common method of treatment of the later manifestations of syphilis is by means of the old mixed treatment, where a minute dose of mercury is combined with a moderate dose of an iodide, with iron and a bitter tonic; if the symptoms do not yield, the active elements of the treatment are increased until the desired effect is produced. The mercury in the mixture is first slowly increased, $\frac{1}{4}$ of a grain of the bichloride of mercury, to $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{2}$, or possibly more; this is especially the case in lesions occurring during the first year or two after infection. For lesions occurring later in the disease, or when others still prove rebellious, the amount of the iodide is increased, the other features of the treatment remaining the same; or possibly being also added to.

Thus, the mixed treatment being continued after each meal, a watery solution of the iodide of potassium, sodium, or ammonium, or a combination of them, is given in Vichy water, *between* the meals, beginning, say, with fifteen grains three times daily, and augmenting the dose daily, until the symptoms yield; in some instances the syrup of hydriodic acid between meals will act better, or the compound liquor iodi, or the iodide of starch may be employed.

If early in the disease, and the mercurial element seems to be required, the mixed treatment may be added to by means of occasional mercurial baths or inunctions. But, personally, I have

not been satisfied with the plan of giving a mixed treatment by means of administering the mercury and iodide entirely separate, as advised by some writers; I feel confident that better results can be obtained by combining them together in proper proportions in one dose, and then augmenting the strength of one or the other element, in the manner above described, to meet the indications of the case.

My remarks have been somewhat personal, in opening this discussion, but I trust that they will be taken as intended, as a contribution of experience and opinion to this most interesting subject. If each will contribute his personal mite it will be better than if the impersonal opinion of others was quoted.

FIVE CASES OF REMOVAL OF THE JAW FOR TUMOR.

Read in the Section of Dental and Oral Surgery, at the Forty-first Annual Meeting of the American Medical Association, at Nashville, Tenn., May, 1890.

BY WILLIAM D. HAMILTON, M.D.,
OF COLUMBUS, OHIO.

The cases that form the subject of this paper have come under the observation of the writer in his service at the Mount Carmel Hospital within the past three years. Three had to do with the superior and the remaining two with the inferior maxilla. There were four females and one male. The youngest patient was twelve, the eldest fifty-five years of age.

In conversation with the eminent surgeon, Mr. Thornley Stoker, of Dublin, last summer, it was learned that one of his patients for whom he had recently extirpated the upper jaw for sarcomatous disease was a woman eighty years old. A still more interesting fact was elicited: that she was discharged from the hospital cured in a fortnight.

Cases of epithelioma beginning in the soft parts will not be herein considered. In this department of oral surgery we are confronted with certain facts at the outset: 1. Difficulty in maintaining anæsthesia; 2. The impracticability of observing with nicety antiseptic details; 3. The tendency to hæmorrhage and shock.

It is to be hoped that rectal anæsthesia will some day be reduced to a practical method, so that an irritating fluid like ether may be prevented from entering the bowel in the liquid state, where it excites such great disturbance, or even perhaps a fatal bloody diarrhœa.

The renewal of the anæsthetic on account of the returning consciousness of a patient upon whom such an operation is being performed is a most embarrassing and pathetic necessity. It frequently means the occurrence of vomiting and the loss of invaluable time. The resort to a preliminary tracheotomy, while possessing certain advantages as a mode of administration, is by no

means free from danger to the lungs and air passages which it is intended to protect, while its performance must add materially to the shock.

Unfortunately the mouth is frequently found to be in an unwholesome condition. The irregularities of the growth, which may prevent separation and closure of the jaws, the occasional existence of a foul ulcer, that has been teased and irritated by opposing teeth, the numerous hiding places for septic matter in such a cavity—all these considerations make it a trap for filth and enhance the difficulty of preventing suppuration. It is all the more incumbent upon the surgeon, however, to aim at thorough cleanliness. There should be liberal irrigations with a harmless antiseptic lotion like boracic acid in an aqueous solution, and in this way all removable matter disposed of in the five days prior to operation.

The strict observance of extrinsic antiseptic details is as clearly imperative in this as in other surgical procedures.

As a preliminary step, with a view to preventing hæmorrhage in removing some of these growths, the common or external carotid artery has been tied. While benefit may sometimes be derived from it, preparatory deligation was not seriously contemplated in any of the cases enumerated. In dealing with the facial artery and vein, the knife was carried quickly down to the bone dividing them clean at one stroke. Their prompt seizure with hæmostatic forceps prevents the loss of much blood and simplifies the operation. Digital pressure by an assistant is available during their isolation.

With reference to shock it may be said that time is a most important element. In order to minimize the duration of the ordeal, scrupulous care should be taken to have a simple reliable armamentarium at hand consisting of strong instruments in perfect condition. For completing the division of bone, a pair of powerful straight pliers with short jaws and long handles, giving great leverage, is invaluable.

For ligating vessels, properly prepared silk is preferable. A precaution that should never be neglected is to transfix the tongue with a coarse silk thread; the ends being tied together should be held by an assistant. It is perhaps needless to observe that anæsthesia should be *very profound* before beginning.

Again it is a rule applying to all such undertakings, to postpone entering the cavity of the mouth as long as is consistent with method. Therefore the bone should be freed as extensively as may be before the mucous membrane is divided. In this way blood can often be kept outside of the throat until the operation is well-nigh completed.

Case 1.—Adeno-Sarcoma of Lower Jaw; Removal of Left Half of Bone; Recovery.

Miss N. M., sent by Dr. A. M. Dent, of Co-

shocton, Ohio, was 27 years old when first seen by the writer. In July, 1884, she ran against the edge of a door in the dark and the left side of the face was struck. Some swelling followed which never receded. From the time of the injury until September, 1888, when she was admitted to the hospital, her face grew larger. The disease first appeared in front of the left masseter muscle and the contiguous portion of bone gradually became implicated. She stated that it had grown more rapidly since October, 1887, than during the preceding two years. A slight oral hæmorrhage took place then and pain had annoyed her most of the time since. The latter was attributable to the continual bruising of the tumor by the upper teeth. A surgeon having been consulted some months previously, had incised and scraped the prominent outer surface of the jaw, and with negative results. The month preceding the second operation had been of rapid progress of the growth. Painful sores existed where the upper teeth impinged upon it. The left side of the face had a rounded appearance, the cheek being prominently bulged outward. The mouth was encroached upon both posteriorly and toward the median line, so that it could only be opened for distance of seven-eighths of an inch. The ramus was extensively involved.

Operation, September 30, 1888. Dr. F. W. Blake and Dr. A. N. Dennison assisted. The usual incision was made and extended in the line of the old cicatrix. A clear exposure of the bone being thus secured, the dissection was completed with guarded scissors, care being taken to cut *on* the tumor throughout. While detaching it from the cheek, several sub-cepts of which it was partially composed, discharged their contents into the wound, the fluid being of a yellow, viscid character. The subsequent steps of the operation including the disarticulation and the median section with the saw were readily accomplished. Hæmorrhage was tolerably free but easily controlled. Interrupted silk sutures were used in uniting the mucous lining of the cheek, and continuous gut for the outside. A rubber drain was inserted at the most dependent point and allowed to remain for several days. Shock was well-marked but yielded promptly to proper measures. Some suppuration of the wound with febrile movement ensued and retarded her recovery. She was discharged four weeks later.

Microscopical examination showed it to be an adeno-sarcoma that had probably developed centrally, expanding the plates of the bone, parts of the growth having undergone cystic degeneration.

Case 2.—Osteo-Sarcoma of Right Upper Jaw; Excision; Recovery.

P. C., æt. 16, from Johnstown, Licking Co., Ohio, was sent by Dr. C. R. Lockwood of that place. He had always enjoyed good health. In the early part of 1884, the right side of his face

was seen to be getting larger, especially in the neighborhood of a defective upper molar tooth, from which the disease seemed to emanate. The growth was gradual until early in December, 1888. He entered the hospital February 8, 1889, at which time the right cheek was the seat of a prominence, extending laterally from the molar bone to the side of the nose, and vertically from the angle of the mouth to the floor of the orbit. The latter was lifted up and the right eye slightly elevated. The hard palate was moderately depressed. There was no sign of fluctuation at any point.

Diagnosis.—A tumor of the upper jaw which had of late taken on such rapid growth that removal was deemed advisable.

Operation.—February 11, 1888. The entire right upper jaw was excised by the external flap method. An incision began opposite the inner angle of the eye, going vertically downward, encircling the wing of the nose and through the lip in the median line. Following again the natural fold between the cheek and the lower lid, it proceeded along the rim of the orbital floor as far as the molar bone. The flap could then be readily raised and the cheek was reflected from within outwards, thus securing a good exposure of the tumor. An incisor tooth was then extracted, and the saw was carried through the hard palate and the alveolus of the missing tooth, the nose being pushed out of the way. A section of the nasal process of the upper jaw and molar bone followed, the latter line of division being continuous with the speno-maxillary fissure. The bones were of ivory-like hardness, so that their division was very tedious and difficult. Large pliers were forced into the notches made by the saw, thus loosening the growth, so that the pterygoid process could be broken and the soft palate cut away. The patient behaved badly under ether, a large quantity of which was required. The extreme hardness of the bones and the time consumed in dealing with them added to the delay. The wound was dusted with iodoform, and stitched with gut inside and out and no drain was used. The shock was very profound. Evidently considerable concealed hæmorrhage had occurred for the patient vomited a large amount of clots and bloody fluid. The lower extremities were elevated and injections of warm water and brandy were frequently given. Hypodermics of morphia and brandy were resorted to, dry heat was liberally applied and after two hours of persistent effort, vomiting ushered in reaction. Union was tolerably firm in 30 hours and his convalescence was uneventful.

Case 3.—*Large Round-Celled Sarcoma of Right Upper Jaw; Excision; Recovery.*

Mrs. M. A. T., æt. 55. Residence, Napoleon, Henry Co., Ohio. In July, 1888, a swelling was first observed over the right molar bone, which

continued to grow until February 27, 1889, the date of her admission. Had had nose-bleed once, a month before. Her health had always been good, and the growth was only slightly painful. The physical alterations and the change in facial expression were about such as were seen in Case 2.

In view of the rapid development of the tumor, excision was advised and was done March 2, 1889. Aside from the fact that the incision was longer, the plan adopted was the same as that in Case 2. Much less difficulty was experienced in making the sections than in the former case, the bones being much softer. The wound having been carefully sutured, neat apposition was secured. External hæmorrhage was very slight. One-third of a pint of clotted blood was vomited after the completion of the operation. Shock was hardly appreciable and the pulse, although somewhat weak, was slow and regular. She passed a good night, and after the first week had no febrile disturbance. She was discharged March 24, three weeks after the operation.

Case 4.—*Sarcoma of Left Upper Jaw; Excision; Recovery.*

Gertrude W., æt. 12, brought by Dr. Chambers, Dentist, from Newark, Ohio. Eighteen months before, when cutting a molar tooth, she had observed that her left cheek was prominent. Two months before entering, she had had a single nose-bleed. She was in good general health. The floor of the orbit was elevated by the growth, and the left side of the nose somewhat smaller and crowded forward. The roof of the mouth was depressed on the side involved. On November 6, 1889, the external flap operation was done in the usual manner. She had no unpleasant symptoms and was discharged well in a fortnight.

Case 5.—*Recurrent (Myroid or Giant Cell) Sarcoma of Lower Jaw; Excision of Right Half; Recovery.*

Mrs. A. W., æt. 36. Residence Corning, Perry Co., Ohio. In 1875 she had undergone an operation for epulis of the lower jaw, in which several teeth with their alveoli were removed. Suspicions of recurrence were aroused early in November, 1889, and she entered the hospital three weeks later. A growth, central to the right maxilla had evidently started at or near the angle, causing the bony plates to spread. It was growing forward on the body and upward on the ramus. It had of late become painful, and excision was advised and done on November 30, in the usual manner. The anterior section was easily accomplished, as only the rim had been left when the epulis had been ablated. Care was observed in securing the vessels, but notwithstanding this fact, persistent and rather free secondary hæmorrhage occurred during the night following the operation, which necessitated the removal of a few stitches and reopening the wound. No vessel of appreciable size could be

found, however, and Monsell's solution was applied. An opening was left for drainage and for the escape of sloughing particles. The bleeding never recurred and the wound healed nicely by granulation. She was discharged in three weeks.

The original disease was epulis of a malignant type. The propriety of removal in cases of epulis is forcibly impressed upon us, and this had been thoroughly done by Dr. McGraw, of Detroit.

These cases and one already reported in the *New York Medical Journal* of May 10, 1887, in which a large tumor and half of the lower jaw were excised, make six in all: three of the superior and three of the inferior maxilla. If an apology be wanted for their presentation on this occasion, reference might be made to the fact that Dr. Deadrick, of Tennessee, in 1810, was the first to remove a portion of the lower jaw for tumor.

Reports of operations of the kind enumerated do not seem to be common nowadays. Whether it be on account of their infrequency, or because they are deemed unimportant, I cannot say.

While an experience such as that indicated is not sufficiently broad to justify one in dogmatizing, I suspect that the larger proportion of these cases can be successfully handled without the preliminary delegation or tracheotomy; that the best way to do them is to get *through* with them as quickly as is compatible with thoroughness.

All the patients are free from recurrence to-day.

ATYPIC HERPES ZOSTER GANGRENOSA, WITH REPORT OF TWO CASES.

Read in the Section of Dermatology and Syphilology at the Forty-first Annual Meeting of the American Medical Association, Nashville, Tenn., May, 1890.

BY BENJ. MERRILL, RICKETTS, PH.B., M.D.,
VISITING SURGEON FOR SKIN AND CANCEROUS DISEASES AND
PLASTIC SURGERY TO GERMAN PROTESTANT AND CHRIST'S
HOSPITAL, AND CONSULTING DERMATOLOGIST TO
THE WOMAN'S HOSPITAL AND MED. COLLEGE.

I am somewhat at a loss to know just how to bring the subject of "Zoster" before you, in the most profitable manner, unless it be to report two cases of that form so seldom met with, even by the specialist, viz.: Herpes Zoster Gangrenosum.

This is the most intense of all forms, being characterized by the usual primary eruption following the usual premonitory symptoms which in character are also very severe.

The vesicular contents remain clear for three or four hours, gradually becoming a light wine color, then a greenish black, soon changing to a greenish brown; these color changes occur around the base of the vesicles, the area of which remains a pigmented brown color for some months.

Necrotic changes occur before the vesicles break, and crusts form immediately after their rupture; the duration of the vesicles may be from three to eight days, and the time of cicatri-

zation is in proportion to the amount of sloughing that takes place. Kaposi says that if the suspected surface be touched early with nitrate of silver or iodine, the eruption will not appear, and that in every hæmorrhagic zoster the necrotic changes begin at the base of the affected spot.

Gangrene may appear in one or more vesicles, accompanied by pain and fever, the pain being of a neuralgic form and located throughout the distribution of any nerve, but oftener over that nerve with main branch nearest to seat of lesion.

The appearance of paresis or atrophy of muscles is not infrequent, nor is atrophy of hair or teeth infrequent, especially in the tissue diseased. Paralysis and atrophy occasionally occur when the eruption is situated in the territory of the trigeminus, or in upper nerves of the throat. Oculo-motor paralysis of zoster facialis and frontalis is sometimes met with.

As to the cause of this disease, there is much doubt, however in many cases it seems to have been in the intervertebrate ganglia, while in others it seems to be a neuritis or some peripheral disturbance. Thus far observers seem to feel that no treatment will retard or shorten the courses of this disease, hence it is a self-limited one.

Case 1.—Lena W., æt. 15, white, American, a nurse girl, brown eyes, dark brown hair, teeth good, height five feet two inches, weight 135, physique good, no glandular enlargement; menstruation regular; drinks beer, wine, coffee and tea; digestion good, bowels constipated, has considerable alopecia.

Small pimples appeared on the hands at 5 years of age, but they never gave any trouble whatever, and disappeared in a few days. At ten years the first characteristic eruption appeared on the chest the size of a three cent piece, and this gradually increased to six inches in diameter; two weeks later appeared in cheek, then on forehead; appetite at this time was poor, headache was severe, vomiting frequent.

Two months later a large patch, quite extensive, appeared on the inner side of the left leg, this was healed by means of simple remedies, and a similar patch appeared in the precise spot of the right leg.

Six weeks later an extensive eruption appeared upon each instep simultaneously; these increased to two and one-half inches in diameter, and in two weeks the inner surface of right knee and ankle was affected followed very soon by a similar condition of the corresponding position of left knee and ankle.

During the succeeding six months various eruptions, slight in character, reappeared over the spots previously healed, but the whole outer surface of the left leg became involved then; and four months later the affection was equally extensive and severe upon the right leg.