

## Clinical Department.

### REPORT OF THE FIRST CASES OF CELIOTOMY AT THE BOSTON BAPTIST HOSPITAL.

BY GEORGE W. KAAH, M.D.,  
*Surgeon to Out-Patients at the Free Hospital for Women, Gynecologist  
of the Boston Baptist Hospital, etc.*

THE Boston Baptist Hospital is at present in Longwood, in what was a private house, and its conveniences, therefore, are not those of older and better-fitted hospitals. The operating-room has been made as aseptic as thorough washing of walls and floor can make an ordinary room; and the fact of there having never occurred a case of sepsis in all the variety of cases operated upon here, is evidence of the good care of the head-nurse in charge. The towels, sheets, gauze sponges and dressings were sterilized in a steam-sterilizer. The instruments were boiled for ten minutes in water with soda. Boiled filtered water was used for washing the sponges and for flushing the abdominal cavity when needed.

CASE I. Mrs. S. W., age thirty-seven. Some two years ago the left ovary was removed by the late Dr. Strong. She felt better for some time; but a renewal of the pain on the left side of the pelvis, and a beginning pain on the right, caused her to enter St. Elizabeth's Hospital, where the uterus was curetted, but with no improvement of symptoms.

Ether examination at the Baptist Hospital showed the right ovary enlarged, and bound down by adhesions, and also some thickening on the left of the uterus. Curetting was done at this time, but without any good result.

Early in November the abdomen was opened, the incision being through the cicatrix of the first celiotomy. The right ovary, enlarged and cystic, was removed, the pedicle being tied with silk. The stump of the left ovary was found bound by some adhesions, which were broken. The incision was closed by silkworm-gut sutures, care being necessary not to include parts of the omentum which were adherent in the line of the first celiotomy incision. The bowels were moved on the third day, and the patient made a good recovery. She is now doing general housework, and has been wholly relieved from the pain she suffered.

CASE II. Miss A. B., age twenty-three. This was a cyst of the right ovary, about the size of a lemon; and the case is interesting mainly because of the very rapid advance made in weight and strength, even before leaving the hospital.

CASE III. Mrs. M. C., age sixty-two. She complained of pressure in the abdomen, and difficulty in micturition and defecation; some soreness, especially on the left side. Examination showed an irregular growth, the size of a cocoanut, apparently attached to uterus and ovaries, and somewhat more movable on left side than on right. Diagnosis of malignant disease was made, and recommendation of abdominal section for removal of uterus. Previous to seeing me, she had been tapped in July, with removal of six quarts of fluid, and again in September, when about eight quarts were removed; for some months she had been having electricity, but with no result. Upon opening the abdomen, the smooth walls of a cyst appeared, filling the cavity of the pelvis. The cyst was drawn out with difficulty and with slight laceration of

its walls, allowing the escape of a brown fluid, which was caught in towels. It proved a papillomatous cyst of the right ovary, extending across the uterus and into the left side, where small accessory cysts had given its irregular feeling through the vagina. The left ovary could not be found, and it had apparently atrophied. The silkworm-gut used to close the incision had been placed in 1 to 1,000 corrosive, which was too strong a solution, particularly in so old and debilitated a patient; for though the incision healed by first intention, there were small abscesses in most of the stitch-holes, which, however, closed rapidly by the application of hydrogen peroxide through a perforated probe. Otherwise, recovery was uneventful.

## Medical Progress.

### REPORT ON THORACIC DISEASES.

BY GEORGE G. SEARS, M.D.

#### THE CONSUMPTION SCORE.<sup>1</sup>

IN view of the agitation of the public mind at the present time on the subject of tubercular infection, which the utterances and writings of not a few medical men have unfortunately tended to foster, a paper by Ransome, with this title, is timely; since it is well to emphasize the fact that the popular dread of this occurrence is out of all proportion to the danger, that it goes far beyond what the facts of the case justify, and that it is likely to cause grievous injustice to many poor invalids, and in some cases to endanger their prospects of cure. The controversy as to the possibility of contracting phthisis by contagion is a very old one, dating back before the time of Galen; but in all the evidence adduced in support of this assumption, the same defect is noticeable, an almost total lack of appreciation of the conditions favoring or attenuating the power of the bacillus for evil. Nevertheless, long before the discovery of the bacillus, and therefore before any measures of disinfection had been practised, the power of free ventilation to prevent the disease was fully recognized. From the universal testimony of the physicians to hospitals for consumptives; from the change in the death-rate in the army and navy and in public institutions, since the introduction of improved hygienic and sanitary conditions; from the fact that the same races of men in one environment escape almost entirely, while in another they are seriously exposed to its ravages; or even from the statistics of Dr. Cornet himself, to whom was due the most widespread influence in the alarmist direction, it may be confidently affirmed that whenever nature's disinfectants—pure air, light, and dry and pure soil—are to be found, there consumption is rare, but whenever there is overcrowding, filth and darkness, it breeds rapidly and carries off large numbers.

Ransome details the results of some experiments, both with pure cultures of the bacillus and with dried sputum (in some cases scraped and reduced to dust), under varying conditions of light and air, guinea-pigs being used for inoculation. It was observed that in all the specimens exposed in the dark tuberculosis was the result even in free currents of air, the minimum of such exposure necessary not being discovered, only

<sup>1</sup> Medical Chronicle, January, 1895.

three days being allowed to pass before they were removed from the air-current, but even then there was evidence that their virulence was attenuated. On the other hand, all the specimens exposed to both light and air, even for two days only, and for one hour of sunshine, were found to have entirely lost their power for evil. These experiments point out the line that should be taken in all efforts having for their object the eradication of tubercle from our midst. He is far from discouraging any of the measures suggested for the limitation of the disease, with the exception of the preposterous proposal for the entire segregation of all cases of phthisis; but in advocating such measures every precaution should be taken to guard against the inevitable effect upon the public mind of spreading these directions broadcast unless they are accompanied by reassuring annotations as to the absolute security that is given by efficient ventilation by night and day, by good drainage, and by an adequate supply of light. The chief reliance should be placed upon these essential requisites of all sanitation, and all our energies directed toward securing them, for it is mainly to them that the great diminution in the death-rate of phthisis during the past thirty years is due. It is surely within the province of medical officers of health, and in every way to the advantage of public health, to make these facts known rather than to strike a note of alarm as to the contagiousness of phthisis that goes beyond the facts.

Some recent investigations of Kirchner<sup>2</sup> also go to show how unnecessary such a scare is, since he has sought for tubercle bacilli many times in the dust of rooms occupied by large numbers of consumptive patients, but was successful in only one instance. He regards it as out of the question that phthisis is or could be communicated by air or dust if the sputum and other excreta from the patient are carefully disposed of, and the vessels and other utensils used by the patient thoroughly disinfected.

#### MIXED INFECTION IN PHTHISIS.<sup>3</sup>

At the close of an interesting paper on this subject, Elsner draws the following conclusions:

(1) Tubercle bacilli can, without the presence of added bacterial infection, cause changes in the lung, giving rise to symptoms of acute pneumonia in chronic or latent phthisis, which cannot be differentiated without bacteriological examination from non-tuberculous pneumonia.

(2) Concurrent infection in tubercular phthisis modifies very materially the course of the disease, giving rise to many acute exacerbations and anatomical changes; hence the conclusion is justified that the clinical picture of the disease is, as a rule, complex. The double infection must be taken into account when indications for treatment are considered.

(3) An acute croupous pneumonia can attack lung tissue, the seat of tuberculous infection, or run its course in any part of the healthy or diseased lung. As a rule, the tuberculosis, if latent, is lighted into activity.

(4) Aspiration from cavities of streptococci or other bacteria may give rise to acute pneumonia, a streptococcus pneumonia. Early and profuse hemoptysis is present in a majority of these cases.

(5) Mixed infection in pulmonary tuberculosis is an

important factor in lowering vitality and the resistance of the patient; all septic and pyemic processes arising in the course of tuberculous disease may be traced to it.

(6) The differential diagnosis of tubercular pneumonia is oftentimes made with great difficulty. In all cases bacteriological examination must be made repeatedly, and culture experiments add to the refinement of such diagnoses.

Without repeated microscopic and bacteriological examinations it is impossible to determine the pathological significance of the innumerable exacerbations of pulmonary tuberculosis.

Spengler<sup>4</sup> has endeavored, in fifty cases, by means of bacteriological examinations of the sputum and carefully conducted autopsies, both from the bacteriological and anatomical standpoint, as well as by a careful comparison of their clinical histories, to get some explanation of the different types in which phthisis manifests itself. As a result he arrives at the following conclusions:

(1) In tubercular phthisis only a small percentage of the cases are uncomplicated cases of tuberculosis of the lungs. If fever is present in these pure cases, the extent of the mischief is much greater than the physical examination would lead one to suppose, and the prognosis is unfavorable. They become still more unfavorable in case a mixed infection is added. These cases are adapted to the tuberculin treatment.

(2) Most cases of phthisis are complicated by a mixed infection with streptococci and may be classified as active or passive, according as fever is present or not. The prognosis of the active form is good if it complicates a local tuberculosis, remains circumscribed, and receives prompt climatic treatment. Other bacteria, as well as the streptococcus, may complicate tuberculosis, such as Fränkel's diplococci, staphylococci, tetragen, influenza and pseudo-influenza bacilli and others. If secondary bacteria appear in a few colonies only in several sputum examinations, fever, if it be present, is not due to the mixed infection but to the tuberculosis, or to some focus of infection other than the lungs. If fever is absent and yet streptococci are found in considerable abundance, the sputum should be carefully washed in order to rid it of accidental impurities from the upper air-passages; and then, if they still persist, the presence of bronchiectasis or cavities may be inferred.

The therapeutic indications are self-evident. Early diagnosis is essential before secondary infection has occurred; and the treatment should be "specific," that is, with tuberculin. Mixed infection can only be combated by pure air, either at sea, in the desert or on the mountains. After the secondary infection has been overcome and tuberculosis alone remains, tuberculin is again indicated.

Huguenin<sup>5</sup> arrives at very similar conclusions, and says that the prevalent idea that patients with fever are not fitted for high altitudes is radically wrong, as it is those cases with pus-infection in the lungs and secondary fever who are fitted for that, and only that.

#### AURICULAR MYOCARDITIS.<sup>6</sup>

Radasevsky reports fully the histories of six cases of heart disease in which the valves were not in-

<sup>2</sup> Zeitschrift f. Hyg. und Infektionskr., xix, i, p. 153.

<sup>3</sup> Buffalo Medical and Surgical Journal, November, 1894.

<sup>4</sup> Zeitschrift. f. Hyg. v. Infektionskr. Bd. xviii, p. 343.

<sup>5</sup> Schmidt's Jahrb., Bd. 247, No. 7.

<sup>6</sup> Zeitschrift f. klin. Med., 1895, Bd. xxvii.

volved, and gives the results of a most thorough microscopic examination of the myocardium, which showed that apart from the often described disseminated fibrous myocarditis appearing in foci, a diffuse form existed which has received little if any attention from writers on the subject, and that this form is often more marked in the auricles than in the ventricles. In these cases the evidence goes to show that where the auricles are affected, either alone or with a coincident affection of the ventricles, marked irregularity of the heart's action had been present, while in those cases in which the auricle remained intact, or nearly so, the pulse remained regular, even up to the time of death, whatever the condition of the ventricular muscles. So far as it is possible to generalize from six cases, his observations show that in chronic myocarditis marked irregularity of the pulse is caused by disease of the auricles and not by alterations in the ventricle.

#### CARDIAC THERAPEUTICS.

In a discussion on this subject at the Medico-Chirurgical Society of Edinburgh, Fraser<sup>7</sup> contrasts the action of strophanthus with other members of the digitalis group of drugs, and says that so far as experiment has proceeded, it occupies the first position in the action which is produced on the contractile power of the cardiac muscle. It increases the contraction of this muscle with a smaller quantity than any other similarly acting substance and with a rapidity unequalled by any of them. When the energy of the action of the members of this group on the heart is determined by perfusion experiments, strophanthus extract is found to be 8 times more powerful than adonidin, scillitoxin and erythrophlein; 20 times more powerful than helleborein; 30 times more powerful than convallamarin; 300 times more powerful than some specimens of digitalin and 3,000 times more powerful than others; and 30,000 times more powerful than caffeine. None of them, however, act so powerfully upon blood-vessels as digitalin. Spartein slows the heart rather by weakening its systole and thus delaying the cardiac contractions than by increasing their strength. It has no direct action on the myocardium, but only on its regulating nerves, and even this can be produced directly only by large doses. The rapidity of action of strophanthus finds an explanation in the facts that the active principle is soluble in less than its own weight of water and that it preserves the diffusibility of a soluble crystalloid. The selection of the proper drug may be based on the considerations just given, but it is also to be recollected that the practitioner can generally best use for any definite purpose the remedy with which he is most familiar from practical experience. Personally, Fraser says that in a large number of cases he has never been disappointed by strophanthus in any reasonable expectation.

In continuing the discussion Bramwell<sup>8</sup> said that he most largely used digitalis in cases of failing compensation, whether with the object of producing temporary effects or of permanently sustaining the cardiac power and preventing further breakdowns of compensation, but agreed with Professor Fraser in thinking it most useful in mitral lesions, especially regurgitation with dropsy, irregular pulse, scanty urine, etc. In cases of aortic regurgitation it should be given more cautiously

and for shorter periods, and cannot be expected to produce such satisfactory results as in cases of mitral regurgitation. In fatty degeneration of the cardiac muscle the use of digitalis in his opinion is not unattended by risk; and he has seen at least one case where rupture of the heart occurred during a course of the drug, and he was inclined to think it the result of its administration. On the other hand, he has found it of great service in some cases where grave symptoms seemed the result of a chronic myocarditis or fibroid degeneration, but he speaks with reserve on this point, owing to the difficulty or even impossibility of always making a diagnosis between these conditions. He always uses the tincture or infusion, since he has seen repeatedly decided poisonous symptoms follow the use of Nativelle's digitalin granules. When the pulse tension is high, strophanthus is usually to be preferred; when a rapid tonic and stimulating effect is to be desired, strophanthus combined with hypodermic injections of strychnia is of great value.

Balfour<sup>9</sup> said that unquestionably strophanthus in a sufficient dose contracts the heart rapidly and certainly; but there is room for doubt whether by this action it also acts as a diuretic, because in both hospital and private practice he had found it uncertain in all doses, and because we know that rest, warmth and diet effectively suffice to restore ruptured compensation in both hospital and private patients, and in this way act as efficient diuretics. The one great defect which he has found, in connection with strophanthus, is that though it forces the heart to contract, it seems to have no tonic action on it; it does not seem to promote the nutrition of the cardiac muscle so necessary to its restoration to a healthy tone, which is so characteristic of true digitalis action. This defect is a very serious one, especially in the treatment of that large and important group of heart cases included under the term of senile heart.

Regarding the danger arising from the use of digitalis, cases of heart disease, such as those commonly treated by the drug, are liable enough to sudden death from various causes, but we may acquit the drug of all share in the fatal issue. Excessive doses will often produce great uneasiness and discomfort; but cases are reported where enormous amounts have been successfully employed in the removal of dropsy, and he himself knew of a cardiac patient swallowing an ounce of the tincture with the sole result of keeping his pulse below 40 for a week. The tonic action of digitalis is ordinarily best maintained by giving the equivalent of a grain of the powdered leaves every twelve or twenty-four hours; such a dose can be kept up for months or years with only increasing benefit. Flabby, dilated hearts, if not much hypertrophied, and especially if young, may often be well contracted by larger doses administered more frequently, for example, one and one-half grains or more every eight or every four hours; but such doses require to be carefully watched since the primary slowing of the pulse may pass suddenly into the allorhythmic pulse of digitalis poisoning, a distressing enough condition, but not dangerous as long as the recumbent position is maintained. In aortic regurgitation, when the left ventricle begins to fail, whether the mitral valve has been opened up or not, digitalis in large doses, but with a considerable interval between, is imperatively demanded, and is often of the utmost benefit. The idea that a prolongation

<sup>7</sup> Edinburgh Medical Journal, April, 1895.

<sup>8</sup> Loc. cit., May, 1895.

<sup>9</sup> Edinburgh Medical Journal, June, 1895.

of the diastole favors further dilatation is a mere myth, since it is more than compensated for by the improved tone of the ventricle which slowly regains its compensation. For the removal of dropsy some degree of saturation is necessary; but, whatever the dose given, the equivalent of forty grains may usually be taken before symptoms of saturation appear. The more rapidly the drug is ingested the more certainly the diuretic action is attained, but once attained the drug may be discontinued for a day or two, and the effect continued by smaller doses persisted in for a longer time. When the pulse is hard and cordy and the limbs tense and brawny, digitalis is of no use, the blood pressure must first be lowered by free purgation, and some of the fluid drained off before the drug will act. Southey's tubes may also be of service, and diuretin is occasionally of great value.

#### POST-DIPHTHERITIC CARDIAC PARALYSIS.<sup>10</sup>

Veronese, in an exhaustive paper on this subject, says that no case has yet appeared in literature where death occurred entirely without warning, some suspicious symptoms having always been present for twenty-four hours at least. It attacks boys more frequently than girls, and is most common between the ages of six and fourteen. Children under six are almost never attacked, probably because in severe cases they usually succumb early in the disease; but adults are not altogether exempt. It varies in different epidemics, but occurs also among sporadic cases. Puny children, especially the tubercular and nervous, are more apt to be affected than the strong, yet in all cases it is preceded by severe general or local symptoms. The latent stage, that is, the period between recovery from the local process and the appearance of cardiac symptoms, lasts usually from two to eight days, but may cover from four to six weeks, although in the latter case the cardiac paralysis is the termination of a severe general post-diphtheritic paralysis.

The reason that the cardiac appears so much earlier than other forms of paralysis is due to the fact that owing to the delicate mechanism of the heart, a tiny lesion, by affecting important nerve centres, may produce most serious results on an organism already weakened or degenerated by the diphtheritic process.

In the so-called latent period a series of suggestive symptoms will not escape close observation, of which the most important are great prostration, apathy, somnolence by day, sleeplessness and restlessness at night, increasing dilatation of the heart with corresponding changes in the sounds, alterations in the character and rhythm of the pulse, increased frequency of respiration and signs of pulmonary edema, nausea, more or less constant pain in the epigastrium and increasing albuminuria. Fever is never present, at least as a result of the cardiac affection. An attack of syncope announces that the disease has reached its height, but the first one is rarely fatal. In cases which recover after two or three anxious days, the symptoms of stasis due to cardiac weakness begin to pass off, edema rarely lasting more than two weeks; but convalescence is very slow, requiring from two weeks to six or more months. Permanent lesions apart from a mild grade of hypertrophy do not seem to follow post-diphtheritic paralysis. The prognosis is very doubtful, though not always fatal; the milder the symptoms and the slower their development the better the outlook.

<sup>10</sup> Wien. klin. Woch., Bd. vi, Nos. 17-22.

The anatomical lesion may be a parenchymatous degeneration of the heart with interstitial changes, fatty degeneration of the myocardium, parenchymatous and interstitial degeneration of the vagi and the nerves and ganglia of the heart, or degeneration of the sympathetic, especially the ganglion and plexus celiacus. It is probable that death is due less to degeneration of the heart than of its nerves and ganglia, and reflexly to degeneration of the sympathetic, especially the celiac plexus.

## Reports of Societies.

### AMERICAN CLIMATOLOGICAL ASSOCIATION.

TWELFTH ANNUAL MEETING, HOT SPRINGS, VA.,  
JUNE 13 AND 14, 1895.

AFTER a brief introductory address by the President, DR. S. E. SOLLY, a paper on

#### RECENT MEASURES FOR THE PREVENTION AND TREATMENT OF TUBERCULOSIS

was read by DR. GUY HINSDALE, of Philadelphia.

He reviewed the extensive provision for this class of cases in England, which country alone has eighteen institutions of this character, providing for between six and seven thousand patients annually; also the French hospitals at Berch-sur-mer, Arcachon, Cannes, Argeles, Ormesson, and that at Agincourt for the consumptive poor of Paris; the new institutions in Germany, at Rehburg for the poor of Bremen, at Malchow and Gutergotz for the poor of Berlin, at Spessart and at Vienna. In the United States mention was made of the new sanitarium at Liberty, in Sullivan County, New York, now being erected as a memorial to the late Dr. Alfred L. Loomis, a former president of the Climatological Association, by Mr. J. Pierpont Morgan; also of the new sanitarium now being constructed at Paul Smith's in the Adirondacks, and of the hospital for consumptives, for the erection of which the legislature of Massachusetts has recently appropriated \$150,000.

The work of the Pennsylvania Society for the Prevention of Tuberculosis was referred to. It was organized to assist in preventing the disease by promulgating the theory of its contagiousness, instructing the public in the practical methods of prevention, and co-operating with boards of health in instituting such measures. The society has distributed 90,000 tracts on "How to Avoid Contracting Tuberculosis," and "How Persons Suffering from Tuberculosis can Avoid Giving the Disease to Others." Its funds are also used to provide hospital accommodation for consumptives. Vigorous efforts have been made by the society to secure better provision in Pennsylvania for this neglected class of cases.

In the discussion following, DR. FREDERICK I. KNIGHT, of Boston, said: When I was before the Finance Committee of the Massachusetts Legislature with reference to this very subject, the question was put to me, first of all, "Have the medical societies of the country made a formal declaration, which has been put on file, in regard to the establishment of hospitals for consumptives?" In England practitioners think the disease has been materially diminished by the hospital accommodations, which have been greater there than in any other country so far.