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Addresses.

SOME OF THE MINOR IMMORALITIES OF THE TOBACCO HABIT.*

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With a Foreword by De Forrest Willard, M.D.

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Man muss etwas Sein um etwas zu Machen.—GOETHE.

When first aroused by feelings akin to indignation by the announcement that this society was about to give a "smoker," it was not because I loved less the brethren chiefly instrumental in making the compromising spectacle possible, but because I loved my profession and alma mater more.

I had been taught, and still believe, that medicine is a sacred calling, that it combines in itself the excellencies of all professions, just as the greater contains the less; that the physician is, or ought to be, a man set apart, devoted to the betterment, not the destructive pleasures, or obliteration of the better interests of humanity, for the broad study of medicine, not to be confined within the narrow limits of therapeutics, considers man morally as well as physically and includes within its sphere the issues of life and death.

As law concerns itself with his constitutional and other rights, theology with his relation to God—or if you prefer it, good—and his fellow-man, so medicine has to do not only with these, but also with the health and indirectly the morals of the community, so inseparably associated with a sound body that often bad morals to the physician simply means bad health.

With the conception of the duties that belong to our vocation, this consuetudinarily implied necessity on our part—transmitted perhaps from Hebrew and Greek priest—for physicians not only to avoid evil, but its appearance, this positive duty devolving upon us to separate ourselves from, and condemn everything causing, either moral or physical deterioration, you may imagine the sorrow that possessed many of the alumni of our common foster mother when they realized that, on the contrary, this association called by her name had gone over to the Philistines, that this division of her sons, of all men, after the

manner of the profane world, had actually decided to give a "Smoker!" had deliberately and officially announced its purpose to throw the weight of its great example in favor of an indulgence condemned by almost every prudent father, by almost every mother and wife, by all who have been its victims, by nearly all who have not been, and by many who are still, under its thrall.

That a collective body of esteemed men should decide to stamp with the approval of a sanitary and presumably sagacious society—recognized custodians of the public health—a custom opposed to health and that has become the bane of domestic and public ethics as well as esthetics, a menace to higher education, a concomitant of nearly every modern error, an enemy of moral reform, a cause of mental decay, a habit, as many homes can testify, often causing the obliteration of that faculty that enables man to recognize the rights of others; that we as an association of physicians should have deliberately decided to feed with the bread of encouragement this procreator of hydra-headed disease, this habit which, according to the opinion of many educational and medical authorities, is the worst curse of modern civilization, is indeed one of those anomalies of conduct calculated to make the judicious grieve.

It is because of a belief in the not always recognized or admitted power of the habit for varied evil that we have been persuaded, mostly by conviction, but also by the compliment of your esteemed invitation to address you to-night on some of the minor immoralities connected with its use.

We are not discussing the rights of the individual, for, much as we regret friends somewhat dead in narcotic trespasses and soporific sins, we presume not to limit the liberty of any man; our protest is with an association, as if there was no other way of blowing the spark of good-fellowship into a flame, officially deciding to do what is not only inconsistent and unseemly, but morally wrong.

After the manner of the schoolmen—those curious old divines of the middle ages who occupied so many otherwise monotonous hours in discussing the niceties of abstract speculation—let us inquire for a moment what is morality and what is implied by vice, its reverse?

It is only necessary to consult a dictionary to learn that "morality implies the quality of an intention, a character, an action, a principle or a sentiment when tried by the standard of right;" "The practice of the moral and social duties, or the duties of men in their social relations;" that in theology, "morality has reference to man's duty toward himself, his fellow-men and God," and that "vice" is defined variously as "something that mars, a blemish, an unworthy or undesirable habit," and "as the habitual gratification of a debasing appetite."

We shall consider the tobacco vice first in relation to

*Read at the New England Supper given by the Philadelphia Society of the Alumni of the Medical Department of the University of Pennsylvania.

†This paper is the result of an invitation from the Board of Directors of the Philadelphia Alumni Society of the Medical Department of the University of Pennsylvania, in which Dr. Woods was asked to address the society on the subject of tobacco. The previous gatherings had been denominated "Smokers," to which title Dr. Woods naturally objected, feeling that not only the thing, but even the name, compromised the dignity of the profession. His acceptance of the invitation, as will be seen by his paper, was intended to bring before the association and to elicit discussion upon an indulgence which he, in common with others, considered derogatory to the intelligence of professional people as leaders of hygienic thought. The article has already brought forth good fruit among thinking medical men, and it is now published at the request of a number of friends for the benefit of the profession at large.—DE FORREST WILLARD.

his better nature and suppression of what is base.

In this connection you will allow me to draw your attention for a moment to the quality of Discontent, so important a factor in the moral, religious, social and physical development of the race, that we are almost justified in calling it divine, in saying as much in its favor, if we knew how, as the blood-stained poet-traitor Macbeth, said of sleep:

———Innocent sleep;
Sleep that knits up the ravell'd sleeve of care;
The death of each day's life, sore labour's bath,
Balm of hurt-minds, great nature's second course,
Chief nourisher in life's feast.

Thus we may say, beneficent Discontent; the originator of reform; the mother of science, literature and art; the maker of beauty, the divine cause to which we are indebted for the amenities of social intercourse and all the buoyant exhilarations of modern life. Our country, national constitution, our consorting here to-night as clothed men around this cheerful board instead of barbarians around the burning bodies of our enemies, are all due to the influence of this thoughtlessly regretted possession. But for it, Luther would have remained a monk; freedom of speech, tolerance in religion, rights of private judgment, liberty of conscience would have been unknown, the Declaration of Independence unwritten. Without it we either retrograde or stand still; with it advancement is sure. The naked savage is content with his bed of leaves; an Alexander nobly discontent because there are no other worlds to conquer.

You will agree with me, therefore, that anything diminishing without adequate return, this progress-evoking quality, is morally wrong. If Columbus had been content with the map of Europe he would never have added to it. If our forefathers had been content with the injustice of an alien land they would never have declared themselves free. Asia was conquered by Athens, Athens by Rome, and the civilization of beyond the sea has been transmitted to us because of the discontent of the men who had gone before. If early man had been content with clay huts and worship in the exposed wilderness, we would not have known the glory of the Parthenon or the stately grace of the Cathedral of Milan. It was discontent that invented the spade, the harrow, the plow. It created the locomotive, replaced the galleon by the steamer, the postillion by the telephone. The studiousness of the scholar, the ardor of the poet, the sacrifice of the patriot, the fire of the hero, and the rapture of the saint, are all due to the presence of rest-preventing discontent; and yet so oblivious are we of its value as a means of conquest and development, that instead of having it instigate to the removal of obstacles, like our elders, to secure their opposite, we merely aim to destroy it with a drug; we put an enemy in our mouth to steal it away, and thousands of young men as a consequence, under the spell of its artificially induced calm, fail in the race of life as the great world with its struggles and aspirations moves on; West Point rejects them, Oberlin does, and many of the better colleges would like to refuse them; success does not attend them; arrested development is their portion, but what care they; like the Lotophagi in the Homeric legend, they have eaten of the enchanted fruit and are content to live in effortless idleness in Lotusland! This then is the testimony of educators—presidents of colleges, the higher schools and military academies—not only

here but throughout the world, in reference to students who fail.¹

It was a recognition of this that caused Fourier to exclaim in one of those prophetic, though terse sentences peculiar to him: "The nation that smokes perishes." This which seems such an exaggeration will bear inspection, for it needs no lighting of the casuistic candle to see that producing artificial tranquillity by a drug—whether it be opium, cocain, hashish, chloral or tobacco—in the place of growth-urging discontent, is an offence against our better nature, weakening that power of progressive achievement that ought to characterize nations and men.

Significant, too, is the fact that unlike other lethal products, tobacco almost alone has no medical properties entitling it to an honored place in the dispensatory. It is not used as a remedy for any disease; there are even no modifications of it employed in the treatment of the sick; it does not destroy germs or keep off contagion as certain conjecturally smoke-cured brethren seem to imagine. Chewing or smoking it does not diminish the danger when inhaling poisonous dust or vapor; it does not "prevent obesity," "aid digestion" or "relieve asthma," as its victims sometimes claim. On the contrary, it has been—not only because of its uselessness but also its danger—ignominiously expelled from the pharmacopeia of every civilized land, and yet, we *physicians*, knowing this and more, come together for the purpose of putting ourselves under its control, call our gatherings by its name, use it with as much tolerance as if it were a panacea for every ill, giving the sanction of our example *instar omnium* to its general use, thus casting our influence on the side of evil by publicly honoring this ubiquitous wrong. Is not this an immorality?

The demoralizing effect of this omnipotent evil enters every avenue of life. The laboring man and his family have no worse enemy than tobacco. "It often leads to drink," says Dr. Chalmers, "and drink leads to the devil." Returning from the work of the day with a pittance, about sufficient for bread, larder empty, children half clad, wife worn out with the overwhelming perplexities of the day, the home and its misery presenting a spectacle that appeals to his better nature, and for a time "wrapped in the worldly creed of prudence," he is under the influence of that discontent that would soon effect a betterment of his estate. He is a teetotaler, perhaps, with scruples against beer, but there on his mantel, void of ornament, lies a pipe black with the stains of long usage, and soon under the power of its discontent-dispelling influence, what cares he for the misery of his condition, the cough of his pallid

¹ They tell us variously that "the evils of tobacco exceed those of drink," that "tobacco is undermining the health and weakening the will of the present generation, and is as noxious as the giant evil, drunkenness;" that "there are students, even clergymen, whose usefulness has been as thoroughly ruined by tobacco as it could have been by drink;" that "it stupefies the moral sense;" that "student-smokers are deficient in scholarship;" that "more young men break down in body and mind and go astray as a result of smoking than of drinking;" that by "indulgence in the solacement of this seduction the power of achievement is weakened and men handicap themselves in the struggle where usually only the fittest survive;" that "tobacco soothes the excited nerves to render them ultimately more irritable;" that "it produces debility in self-restraint and weakens the power of the will;" that "it impairs physical vigor, perverts the taste, diminishes mental capacity, corrupts the moral sense and stimulates the animal nature;" that "it causes among students inferior scholarship and takes away the sense of shame in failure;" that if a census could be taken of all the young men who smoke, it would surprise and ought to distress our American people, for it has to do with social, moral and political degeneracy; that "the tobacco habit gains ground at the expense of emotional refinement and spiritual force." As witness Spain, Italy, Persia, Turkey, Syria, Mexico, Egypt and all the retrograde countries where even women are its prey.—(See 'The Tobacco Problem,' by Meta Landu. Boston: Lee & Shepherd.)

wife, the helpless cry of half-fed children, the tawdry emptiness of his spare apartments, for with a garulous newspaper in his hand and a pipe in his mouth, is he not translated into the listless paradise of self-complacent minds where care does not enter; and "the slavery holds him within this sepulchre of ambition," and will not let him go until the grave closes over him, a tobacco-saturated victim of self-indulgence, his orphaned children too often a care on the State?

Is not this an immorality? Would it not be better, more manly, instead of thus "sicklyng o'er the native hue of resolution" with the pale cast of self-delusive content, to oppose and conquer the ills we have rather than resort to the reconciliation of a drug that moralists tell us "makes man selfish, unmannerly and sometimes worse," that permits him to carry unseemly odors into any company, a sick wife's or a sick child's, and show himself callous to the requests of others, and that would allow otherwise gentlemen "to fill the atmosphere of the continent with a perpetual stench," but for the self-defensive prohibitions found *necessary* to be placarded in places of public resort.

"The drunkard does not compel you to drink, the opium-eater to eat opium, but the smoker makes you smoke, nay more, visibly inhale the very vapor just ejected from his own mouth." Is not this a minor immorality to be regretted and concealed—since it seems it can not be abandoned—at least practice alone in the middle of a ten-acre lot, rather than as in these unseemly "smokers," *ater noctes*, unblushingly vaunted and exposed.

Again, Coleridge's axiom that "every educated man ought to know the best things," like Matthew Arnold's on the same subject, has almost become one of the pedantries of pedagogics.

If this applies to the ordinary gentleman, it does so with double force to the physician, who needs to be a man of varied endowments, requiring a wide extent of knowledge for the proper practice of his profession; associating with the most polished people of the community, he certainly ought to be acquainted with "the best things."

"We often can not do our entire duty," says Bagehot, "because of unpopularity," and what, we may ask, in a learned profession, causes unpopularity more than the frivolous ostentation of narrow endowments? Yet how can that man, however limited his horizon, with perhaps nothing quick about him but his temper, feel so dissatisfied with himself as to cause the realization of Coleridge's dictum, who carries in his pocket a drug that will produce inflation and content when he ought to be miserable and ashamed? He may not be living up even to the necessarily limited opportunities of his own profession. He may know nothing of "the best things," the great works, unconscious of the soul, the mighty have projected into their achievements; . . . the books of nature, inspiration and achievement equally closed to many, because with a self-complacent cigar in their mouths, a tawdry newspaper in their hands, they are content to be unacquainted with the best things, content to leave the mighty masters' mysteries, while they float the primrose way of dalliance on the vapor of a weed. Is not this an immorality?

Are there not men of good purpose in the profession, confined within the narrow limits of a mere specialty world, excluded from the essential delights of a more comprehensive life, who do not know a language

but their vernacular, and, like the Mesquites of Homer, "know that wrong," who are utterly unacquainted with the best things in those universal tongues, painting and music, familiar with but little in the history of their own compassionate art, whose mere treadmill existence is so full of puerilities and self-noise that there is room for nothing else, who do not even perceive, as Professor Gross once said, that "the doctor who knows nothing but medicine does not know that?" Like Bottom, the weaver, satisfied with the "tongs and bones" when they might have celestial symphonies, the music of the spheres, the great "well of Truth" from which they draw their facts a mere barrel, and sometimes empty, and yet they are content! or if there is an occasional realization of deficiency, instead of permitting discontent to inspire repair, take a smoke or a bite from a mass of talismanic material they carry in their pockets—coerce the reward, omit the preliminary work—and presto! they are Sir Oracle, and when they ope' their mouths let no dog bark.

Is not this a minor immorality, especially on the part of the younger men, presumably self-reliant and strong, yet instead sometimes tobacco voluptuaries at 30, so regardless of the fitness of things, we have almost become familiar with the sight, as to ride through the streets with cigars in their mouths and enter the rooms of the sick reeking with the fetid fumes, stultifying professional propriety . . . ?

"It changes thought into reverie," says Victor Hugo. "It besots the nations," says that prince of observers, Balzac.

Again, is it not acquiescence in evil, to aid by concerted professional action, or alone, a *traffic* that makes morally obtuse the people who engage in it, and that constantly and persistently uses obscenity for the popularization of its wares, whose most powerful firms, as a matter of mere uncondemned routine, draw attention to their products by pictures intended to pollute and are only prevented by lack of ability from filling homes with indecency, the public imagination with suggestions of vice? Are we justified in adding thus to the power and ill-gotten wealth of the great tobacco houses, the vile people who mock morality, scorn modesty, who never hesitate to corrupt youth merely to effect a paltry sale, and are base enough to pictorially employ the fact of certain Cyprians taking to tobacco as a reason why it should be used by our sisters and wives?

Is it not an inconsistency for us *physicians*, teachers of sanitation, protectors of public health, interested *volens volens* in the spiritual uplifting of our fellows, members of a responsible, yet joyous profession, though "as full of labor as a wise man's art," is it not an immorality for us to give the sanction of our conduct to the use of this obtunder of moral discrimination; that, to repeat again familiar facts, weakens the memory, vitiates the appetite, produces vertigo, enfeebles the action of the heart, depresses vitality, leads to intemperance, arrests development, causes insanity, amaurosis, deafness, laryngitis and cancer of the lip, and makes men content with conditions needing correction and reform?

These charges, suggestions for discussion, if you please, can not be laid at the door of the "giant evil," alcohol, for with all our knowledge of the wrongs of drink, we can not but admit that it is the excessive use, the abuse of the fluid "that makes glad the heart of man," that has caused so much injustice and distress, but with Raleigh's discovery, even its moderate

man's duty to himself, viz.—the development of use often produces the indifference and pseudo-content that makes possible many of the evils we regret. The old intellectual masters "who still rule our spirits from their urns," the great works in every department of exalted endeavor, the mighty things of the past—the pyramids, decalogue, the psalms, prophets, Homer, Athens, Laocoon, Venus de Milo, Apollo, Phidias, Scopas, the Coliseum, the Forum, Pantheon, La Nile, the Sibyls, Pieta, Sistine Madonna, the sublime creations that perennially inspire intellect and heart were done mostly by people who drank—we but state a fact—before the pipe prevented the ultimate development of the renaissance, but the frantically boasted progress of this tobacco age, when master and man, artist and artisan are equally its victims, has to do chiefly with the arts that produce mere physical comfort and ease, and but little with the great things that perennially appeal to the soul.

We do not mean to imply that genius is made impossible by tobacco, that it prevents all moral development, or that the prominent people of modern times have avoided its evils, for to their loss they have not, but we do claim that with our enormously increased facilities for the inculcation of sound principles and learning (in the past twenty years \$200,000,000 having been given in private gifts alone for higher education), in these *nicotin* days when grave professors despairing over soporific lectures endeavor to gain even an ephemeral interest by seducing students to "Smokers" in their tobacco-poisoned rooms, converting as it would seem, every opportunity of college life into an excuse for the immolation of their independence to their grobian deity, in these *nicotin* days we repeat, with their facilities for the acquirement of sound principles and learning, it is a significant fact that we produce so few men of supreme intellect, that so many of our high public places are controlled by incapable people, and that our public buildings, even our venerable public buildings, often in their most admired places, too, as if like Sir Toby Belch there was "no respect of place, person nor time" in us, are so defiled as a consequence of the pernicious habit that we have become a byword among the nations.

Nor do we mean to assert that worth is obliterated by tobacco, that its use always implies minds resigned to the seductions of sense, that getting under its influence secures entrance into the pornerastic paradise of the sexual voluptuary, as the obscene advertisements of tobacco vendors aim to indicate; this may and evidently does apply to youth, and is one of the ways by which it leads to their moral ruin. The sexual precociousness and depravity of boys and young men addicted to tobacco is familiar to you, and the vile pictures by which tobacco dealers foist their wares on the public show that they at least recognize the kinship of the two vices, yet one of the perplexities encountered in opposing the tobacco habit is that so many otherwise good people remain its devotees—Pantagrue took Panurge for his favorite—acquiring the habit usually during the thoughtlessness of adolescence, notwithstanding resolves and regrets, it clings like a horrible Old Man of the Sea, to the end. It disfigures and degrades youth and makes senility, that needs so much to be attractively neat and clean, malodorous and repellent.

Do not either make the other mistake of quoting in support of the harmlessness of tobacco certain dis-

tinguished persons addicted to its use, living long and doing well, although surely not as well as if unbaned. There is a temptation to this sort of reasoning, especially on the part of people desiring justification for faults they either can not or will not overcome. Coleridge's and De Quincey's bondage to opium, Hirst's and Verlaine's to absinthe, Rossetti's and Naphey's to chloral, Burns' and Poe's to alcohol, notwithstanding the productive power of the men, do not imply that their habits were harmless and justify their adoption by others. As well might we urge that epilepsy was "harmless" because Cæsar and Charlemagne, Mohammed, Napoleon and Flaubert were epileptics, or that scrofula "augments the power of judgment" because Æsop, Johnson and Pope were scrofulous, or that consumption "quickens the imagination" because Keats, Clough, David Gray, Lanier and Stevenson were consumptives, or that neurasthenia "draws wisdom from the lips of philosophers and shuts up the mouths of fools," because Spinoza, Kant and Herbert Spencer were never well, or that insanity was an advantage because Antone Wiertz, William Cowper, Nathanael Lee and William Blake were insane, or that sacerdotal mutilation was a benefit because Narses and Origen were thus mutilated. There are minds that nothing can keep from rising above the shallows, but this in spite, not in praise of, restraining influences, but this is no excuse for their adoption or sanction by us, who because of the responsibility of our calling ought to stem the tide engendered by the will-engulfing weed rather than drift indolently upon its bosom, for we may be assured, to use the words of the Autocrat of the Breakfast Table, that "the stain of the reverie-breeding narcotic strikes deeper than we think."

The vulgarity and licentiousness of the press, with its mercenary pandering to vice, corrupting as it does that very fountain of national strength, the home; the lubricity, the demoralizing baseness of the degraded drama, disfigurement of hoardings by the cigarette-soaked indecencies of the variety stage, making it difficult for our children to walk the streets without contamination, the growing fondness for certain social functions with their flimsy vaudeville adornments, the mockery of and attempted obliteration of personal puritanism, the crass things done by tobacco-biased young people, degradation of seats of learning by the introduction of smoking-rooms, those hotbeds of vice and agnosticism, of ballet dancing and brainless burlesque—imbecility and irreverence under the auspices of fashion—defilement of public buildings by foul receptacles provided for a people so base that it is necessary to ask them to please not spit on the floor, the negro minstrel methods of some of our churches, the effeminacy of religious periodicals with their venal advocacy of successful quackery and fraud, the prevalence of the gambling mania among women, leveling all ranks, wasting energy, dissipating time so much needed in more ennobling ways, medieval grotesqueries, euchre and wine parties for the spiritual and physical benefit of the outcast and sick, made so by gambling and drink! what, unless completely engrossed in other things, could induce thoughtful men to silently submit to these, but that undiscriminating drowsiness of conscience—"denying nothing, doubting everything," so frequently induced by tobacco?

Thus our limit is attained without our having suggested but a few of the more elusive immoralities of

this least decorous of "the pleasant vices of which the just gods make instruments to scourge us." Others, likely more convincing, will occur to each, as it is the physician's function to detect the beginning of evil. Because of such neglect—it is too late when ignorantly acquired indulgences become fixed habits—there are but few families without at least one member maimed in some of his faculties, neglecting some of his duties, violating some canon of social or domestic ethics because of the seductions of this alluring tempter, so that content, evidently designed by nature as a reward for successful labor, is coerced without labor by the hypnotism of a drug that makes men "lovers of pleasure more than lovers of good."

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SURGICAL TREATMENT OF PERFORATING AND BLEEDING WOUNDS OF THE CHEST.*

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The dangerous hemorrhages of the chest that more frequently give the surgeon an opportunity for the application of direct hemostasis are those resulting from parietal, pulmonary and diaphragmatic wounds. Hemorrhages from the aorta and its large intrathoracic branches, the heart, the pulmonary arteries and veins before they penetrate the hilum, the *venæ cavæ* and *venæ azygos* are promptly fatal, especially if due to gunshot wounds. These are the chief causes of the great and unavoidable mortality from chest wound on the battle-field. From the surgical or operative point of view they need not be considered, as the patients die, as a rule, before they can be reached; though to this rule the records show some remarkable exceptions.¹

It is more than probable, as shown by recent reports, that more frequent and successful attempts will be made in the future to relieve the stab and punctured wounds of the heart that survive the immediate effects of the injury; but this class of cases will ever be rare, in spite of the brilliant examples of Farina, Capellan, Rhen, Parozanni and Parlavecchio. As to the gunshot perforations of the heart, they will continue, for obvious reasons, to spare the surgeon even the contemplation of his helplessness to relieve them.

In spite of the antiquity of the recommendation, I would insist upon the importance of carefully examining all wounds of the chest, presenting serious symptoms, for injury to the internal mammary or intercostal vessels.

The fact that bleeding from these vessels is frequently overlooked because it is so often concealed and internal has been clearly impressed upon my mind by two cases of stab wounds of the internal mammary artery and one of the intercostals that have come under my observation. All these cases occurred in the Charity Hospital—the two mammary injuries ending fatally. In one of these, at least, a careful and thorough examination would have probably averted the fatal end.

*Extracted from an address on Surgery of the Chest, read before the Louisiana State Medical Society.

¹Otis and Delorme, among the military surgeons, have collected a number of wonderful cases of survival after injury of the large arterial and venous trunks in addition to the more numerous recoveries after heart injuries. A rough idea of the proportion of the fatalities from hemorrhages due to injuries to the great vessels as compared with the lung injuries is obtained in a statement made by Liddell. At New Bern he examined thirty-two dead from chest wounds, and of these, at least eight

Case 1.²—A. B., male, negro, aged 25 years; was brought in the ambulance suffering from the effects of a stab wound of the chest, implicating some large vessel. Much external hemorrhage had taken place at the time of injury, but this was stopped without much difficulty. When brought to the hospital, the patient was very pale and suffering from profound shock; breathing short, rapid; pulse intermittent, very rapid and almost imperceptible; consciousness retained; complained of a feeling of great oppression in the chest. Messrs. A. and M., the ambulance surgeons, immediately injected an extemporized saline solution in the median cephalic. The pulse improved at first as the fluid flowed into the veins, and almost the normal rhythm and number of beats had been reached when the injection was stopped. About two pints were injected. Though the pulse was very notably improved, the respiration still continued quite rapid and panting. The general effect on the patient was most remarkable. He appeared greatly relieved of his previous anxiety and distress and so expressed himself. The effects of the injection were temporary, however, and the patient succumbed about four and one-half hours after admission. The post-mortem examination revealed an enormous hemothorax, caused by a completely divided internal mammary artery (third interspace). The pericardium had also been perforated, but the heart was intact. In this case vascular depletion, anemia and apnea, from complete compression of the left lung, were the causes of death. Still, in spite of these eminently lethal conditions, life was prolonged several hours by the saline infusion. It is reasonable to conclude that this patient would have had a better chance for recovery had the original wound been enlarged and the bleeding vessel secured *in situ* while the patient was being stimulated with the hot saline solution. The belief that a large pulmonary vessel of the heart had been injured discouraged any attempt in this direction.

The next case is one in which the injury was precisely similar, and yet, in which, notwithstanding the ligation of the divided mammary and exploration of the heart and chest while the infusion was being applied, the patient died in less than twelve hours after the intervention, from the combined effects of traumatic anemia and apnea.

Case 2.³—F., white, male, aged 25 years, laborer, at 2 A.M., April 6, 1897, was stabbed by a companion in a drunken brawl. The wound was inflicted with a pointed clasp knife, which entered one-third of an inch to the left of the second sternocostal junction, on the left side. The wound was a little over one-half an inch in breadth, and was directed obliquely downward and to the left. The cartilage of the second rib was almost completely divided and part of the interspace below was involved. When seen by the ambulance surgeons, the patient was completely collapsed, and it was believed that he would scarcely survive the transfer to the hospital. He had bled profusely from the external wound, but this had finally stopped spontaneously by the formation of a clot. While in the ambulance the clot became detached and the bleeding was renewed. Upon arrival at the hospital the assistant house surgeon on duty made a careful examination and decided that the internal mammary artery had been injured. The pulse was so weak that the patient was at once infused, and received three-quarters of a gallon of hot saline solution, intravenously, with decided restorative effect. The man's condition was so serious, however, that it was decided to disturb him as little as possible. Instead of a regular dissection and ligation of the injured vessel a deep wire suture was passed through the thickness of the chest wall, encircling (as was believed) the wounded vessel in the interspace, the ends of the wire being firmly twisted over an iodoform gauze roll, which with two other stitches completely closed the comparatively small wound.

The bleeding appeared to be controlled by this means, and the patient was put to bed, where he was warmed up with hot cans, etc. The great shock and signs of internal hemorrhage aroused the suspicion that in addition to the internal mammary, the heart or lung had been injured. The length of the blade, the great violence of the blow, which had nearly cut the cartilage in two, and its position in the precordia, confirmed this im-

had wounds which must have involved the heart and great vessels.—Otis' Surgical History of the War of the Rebellion, Vol. ii.

²Abstracted from the author's paper entitled "A Clinical Report on Intravenous Saline Infusion in the Wards of the Charity Hospital from 1888-1891." Louisiana State Medical Society's Transactions, p. 1891, and New Orleans Medical and Surgical Journal, July, 1891, p. 16.

³I am largely indebted for the notes of this case to Dr. A. R. Hagen of New Orleans, who embodied it in his excellent graduation thesis (unpublished): "Reports of Five Gunshot and Stab Wounds in and about the Pericardium." Medical Department Tulane University; class 1896-97. Dr. Hagen was in attendance as interne in my service, Charity Hospital, ward 9, when the patient was admitted.