

sense of the word, should be built away from the neighborhood of cities and kept solely for the use of incipient cases or for those in whom the disease has not so far progressed as to preclude a life of usefulness again. Far-advanced cases should not be sent to such institutions, but for them hospitals of different construction should be made within easy access of large cities and towns to enable friends and relatives to visit the patients without entailing much loss of time or expense.

It is of vital importance, moreover, if the best and most lasting results are to be obtained, that sanatoria intended for patients who are still in vigorous bodily condition should not be so large as to render personal supervision almost an impossibility. In the watchful care necessary for each individual at a critical stage of the disease, when ignorance may be the cause of fatal errors in mode of life, lies the great virtue of this method of treating tuberculosis. Just so surely as we increase the proportion of patients to the number of medical assistants beyond certain limits, just so surely do we diminish the chances of proper supervision of individuals and thereby run great risk of not gaining favorable results for those under our care.

One fact I believe now to be of great importance if we would keep public sanatoria for the tuberculous above the level of mere boarding houses with medical attendants. I have already alluded to the extraordinary interest awakened throughout the world in the last decade by the favorable results of fresh-air treatment. This is a great step in advance and of great educational value; but we should now keep something higher before us lest we stagnate and merely content ourselves with watching a large percentage of patients leave our sanatoria with the disease in a state of arrest, ready to act as missionaries in the world to teach others the simple but essential laws of hygiene. We should aim now to make our state sanatoria centers of scientific research, where clinical observation can go hand in hand with laboratory investigation. That this is not utopian scheme for public institutions, is well illustrated in the Boston City Hospital, which, although under municipal control alone, not merely offers practical aid to thousands of sufferers from acute diseases, but has built up slowly a pathological and bacteriological department which is an honor to Boston, and the fame of which is now established in America and Europe.

With a great clinic like that now at Rutland there is an almost unrivalled opportunity not only for giving immediate aid to hundreds of sufferers from tuberculosis, but for establishing, by comparatively simple means, the nucleus for laboratory research, which shall have for its special object the study of methods for stamping out tuberculosis, or at least of so keeping it under control that the awful mortality from this disease may be reduced to a minimum.

In order to place our state sanatoria on such a basis, it is essential that those in control should be men and women of broad vision and that the policy of such institutions should be left to those whose special training fits them to be guides for scientific as well as practical work.

With the example before us of what Trudeau has accomplished in the study of tuberculosis in his laboratory at Saranac Lake, and with the great hope ahead of us that the disease may yet be conquered, I can conceive of no more inspiring ideal for state institutions, nor anything in which our individual communities could take greater pride than to make such an ideal a reality. That

this can be done I firmly believe. It only remains for others who have similar beliefs, to use their influence to this end, and we may yet live to see our wishes accomplished.

Original Articles

THE HOSPITAL PROBLEM.

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The hospital as an increment in the advances of civilization is worthy of more serious attention than it has received. It is an example of the constant tendency in present social evolution to specialize our activities and standardize our services and public functions. Its growth is inherent in the gradual passage of man from a smaller, lower, simpler, less uniform and coherent family unit to a larger, higher, more complex and more uniform communal unit. Once the house contained and the household managed all the affairs of life; eating, clothing, sleeping, recreation, and the eventful ceremonies of marriage, birth and death. Now much of the preparation of food, almost all the production of clothing and furniture, a large part of the recreations of life, are outside of the household, and the affairs of the home are simplified, while the standard of life is raised and the mechanical efficiency of every trade and occupation is enormously increased. So complicated, technical and occasional a service as the care of the sick could not in the nature of things very long escape the spirit of concentration, specialization, and standardization. As a result we have the hospital as a factor in modern life—a factor increasing in its extent and intimacy with every phase of society, commerce, politics and war. This factor, the systematic and economical care of the sick, is far reaching and concerns every grade and station of life, but none more than the specialized surgeon. It is worth while then to look at the hospital as a modern economic and technical institution and consider its probable errors, dangers and abuses, that we may better adapt ourselves to the ethical and economic questions to which its rapid and sudden development finds us without precedent or custom to control.

From a purely economic and social point of view the hospital is as necessary as the bakeshop, the tailorshop and the theater. It supplies at a minimum expense, within the reach of all, the maximum of skill in the care of the sick and injured. Sickneses are inevitable, though infrequent emergencies, in every household and in the life of every individual. It allows the standard of life in the community to rise everywhere, at least in the matter of medical services, to the maximum level. The manual tradesman at a moderate wage may have as prompt, effective, skillful and even luxurious medical and surgical services as the bloated bondholder or the munificently remunerated professional man. The heartrending sufferings of the afflicted poor in their narrow quarters, the revolting deformities and sickening diseases of the neglected, and the pitiable spectacles of the defective in our neighborhood or on our streets no longer disturb our over complacent sensitiveness. The sick and injured are quickly carried by our multifunctioned police department to the nearest hospital, our insane and epileptics are segregated from those of us who are accredited as of sound mind, and thus we are permitted to go serenely on in our chase for wealth without hearing the creak of the friction of civilization. At the same time it is cheap.

The house may be smaller if the births, sicknesses and surgical operations are provided for in the hospital. The wages may therefore be reduced, and yet the standard of life remain the same, or even raised. From an economic point of view the hospital is a success. It is ready, quick and cheap. It is economy, therefore, for the employing class to build many hospitals at the expense of a few million rather than pay the wages necessary to keep their employes in equal decency in their confinements, sicknesses and surgical operations at home. Whether these hospitals are built as railway hospitals, as eleemosynary adjuncts of religious societies, or as monuments of national or racial pride, matters not either to the exploiting capitalist or to the suffering patient. The result is the same, a diminution of waste, an economic gain, and an increase in technical efficiency, and a gradual rise in the standard of life.

The character of the hospital is determined by the motive of its management. In our country the founders of hospitals have been largely influenced by the miserable condition of the poor in confinement and sickness. Pity, charity, and so-called benevolence has been the foundation on which emergency and eleemosynary hospitals have been raised. Their prime function, therefore, has been to relieve suffering rather than to restore to health and usefulness. Hence the great lack in all our hospitals of those postoperative gymnastics and hydropathic methods which form so large a part of the treatment of the hospitals of Europe in which the working people receive not only ordinary medical and surgical attention, but such orthopedic and general development as fits them to go from the hospital gymnasium immediately to their trade, whatever that may be. The whole construction of the hospital, from the location and the architecture to the minutest detail of administration, is modified, contracted, or extended by the motive of its foundation, and by a certain *Zeitgeist* which no amount of reason, argument or evidence can perceptibly modify or change. The superficial observer who visits the amphitheaters and operating rooms of the German hospitals may see little difference between them and our own. It is in this protracted after treatment, the general service and the authority and responsibility of the surgical staff, that they surpass us. Our hospital trustees are supreme and our medical and surgical staff their underlings and servants. Each department, the engineering, the culinary, the nursing and the pharmaceutical, stands in the same relation to the administration as the medical staff. It is often impossible for the medical and surgical staffs of our hospitals, except by the most undignified diplomacy, to secure what seems to them and all of us, the most rational and economical conduct.

The management and influence of the hospital is of the greatest interest to the profession. In no other walk of life are the emoluments and honors of each individual so dependent as in ours, on the ability, integrity and character of its most favored members. The members of our hospital corps have most fortunate opportunities. They receive an unearned increment of selected cases for treatment, and bring honor and profit to the profession, as well as health to its patients, if these cases are treated with scrupulous care and unflinching fortitude and fidelity.

A position on a hospital staff in our country does not carry a salary with it, but it gives to the intendant an unearned increment of cases which furnish a sufficient remuneration in money and reputation. Often, indeed, the interest of the religious sect or solidarity by which

the hospital is organized makes each member of that association or body far and near a cryer and a drummer for their hospital, and incidentally for the members of its staff, and many patients are diverted from their natural channels through the general local practitioner to the consultant or operator he might for professional reasons select, to the staff man of a sectarian hospital to which the patient's religion, nationality or race allies him. To have a fervid religious sect, with a substantial, numerous and loyal hierarchy behind his hospital to sanctify it with devotion and fill it with its devotees, and the rich material for its propaganda, is worth more to a physician and surgeon than six columns a week of the most skillful exploitation or of blatant advertising in three daily newspapers, to the prevention of which method of securing patients our societies and their code of ethics is so strenuously devoted. In many of our public hospitals the staff, however appointed, serves absolutely without salary, and in one such institution at least, such a staff has been willing to submit to a competitive examination conducted by the political authorities.

The medical profession as a whole has a reasonable claim on the hospitals for some return for the gratuitous medical and surgical service which they receive. The legal profession is well remunerated for many public services, both directly in the salaries and honors to the bench and in fees to advocates and attorneys, and indirectly through law libraries and court publications. The commercial world does not serve the hospital at a less rate than it does hotels or private families. For gratuitous medical service some hospitals render little or nothing to the profession of medicine. The wards are closed to medical instruction. The clinics are hedged about with troublesome and useless restrictions. The necropsical and laboratory equipment are hampered and limited, and worst of all the gratuitous medical staff bears an impersonal responsibility without adequate authority, and the odium of each failure is born by the general medical profession. Even in the semipublic pay hospitals the medical and surgical staff whose members have such advantage over other practitioners owe the profession as a whole a loyalty, gratitude and service which is too often forgotten. The material over which such favored medical men preside is the material of the whole profession and should be considered sacred. Too often is it made the basis of personal exploitation or selfish greed. Few members of our hospital corps publish commensurate contributions to medical literature. They receive an unearned increment of material which another might get by open advertising, and yet they render to the profession no adequate return. That notable exceptions can be brought to the readers' mind at once only proves the rule. Both hospital trustees and medical staffs are unmindful and neglectful of their ethical relations and duties to the medical profession.

The organized medical profession ought to control the appointment of the staff in public hospitals and influence the appointment of staffs in private institutions, both as a safeguard to the interests of patients and as an earnest to the honor of the profession. The celestial or Confucian written examination falls as short of securing a rational result as the scales and yardsticks do in selecting officers of the navy. It required the battle of the Sea of Japan to demonstrate the folly of the one, but it hardly seems necessary to follow the centuries of China's inert bureaucracy to recognize the inherent inefficiency of the other. Not only should the staff receive the recogni-

tion and endorsement or appointment of the profession, but the professional fees which the staff commands should be subject to such revisions as would prevent the abuses so apt to creep in. The commercial spirit among trades-people, and even some of their betters, is so strong on the verge of the grave that they hesitate little to rob the profession of an adequate remuneration by simulating penury, or at least by suppressing the facts. A position on a hospital staff should not be a private sinecure for the satisfaction of personal ambition or financial greed, but a professional trust, carrying with it local duties to the organized profession, as well as worldwide obligations to render the most skillful and conscientious service and publish the most carefully studied and conscientious observations and results. It is the duty of the staff to make the hospital the most serviceable to the patient, and at the same time the center of medical progress and educational and professional good feeling in the community.

The exploitation of a hospital for the personal ambition or aggrandizement of an overshadowing member of a staff, or the exploitation of a staff for the interests of a solidarity or society, is inconsistent with the best interests of our profession, the unfortunate patient, and society as a whole. In the former case we have seen patients brought together by a department of publicity and promotion, examined and brought to the operating room through a method and by a machine patterned after the prevailing method and business machinery of a factory or department store, operated on by a rigidly systematized operative technic, taken to their rooms and nursed to convalescence according to a printed and inflexible after treatment. Such a mail order hospital does business and does it well on a standardized material, but unfortunately the material is not subject to standardization, and the machine which works perfectly well on ten cases fails to extrude the eleventh as a good machine should do, or turn it over to the "custom surgeon" as a sort of "made to order" or "special job." Even so simple a specialty as herniotomy can not be undertaken by a surgical machine and carried to unerring success. The man is more than his hernia and presents a problem greater than all the technical possibilities of a herniotomy. It is not the hernia that requires professional consideration and treatment. Herniotomy might become as systematized and technical as the morning shave or the Turkish bath, but the great army of hernia bearing men will each present a problem of illimitable possibilities and interests and will always require the most considerate, leisurely and personal investigation.

Each patient is always and in an overshadowing sense a man, and when he is sick he presents all the possibilities of disease. The only rational treatment that he can receive must come from the physician who is on his side more a man than a doctor, and more a doctor than a surgeon or other specialist. The higher the mountain peak of special professional excellence the greater, broader and more massive the plateau of general medical skill and human character on which it must necessarily depend. Under no circumstances can the care of the patient be divided up between several independent and unrelated physicians, whatever their special excellence or skill may be. The primitive relation is the only safe one, a sick man on the one side, a conscientious doctor on the other.

When the industrial revolution of the seventeenth century began it found Europe peopled with independent tradesmen, surrounded by their intimate and friend-

ly customers, and possessed of all the tools, buildings and material necessary to the practice of their art. Now we find the homeless, tool-less dependent machine operators far removed from the people who furnish a market for the standardized product of their toil. The hospital is essentially a part of the armamentarium of medicine. The independence and the honorable position of medicine rests on the full control of its tools. If we wish to escape the thralldom of commercialism, if we wish to avoid the fate of the tool-less wage worker, we must control the hospital.

THE PATHOGENIC BACTERIA OF THE CONJUNCTIVA.*

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Our knowledge of the micro-organisms which produce pathologic conditions on the human conjunctiva, of their occurrence in various sections of the world and of the conditions necessary for their growth is becoming gradually more exact, although many points are still in dispute and await further accumulation of facts.

We know definitely that the same form of inflammation of the conjunctiva can be produced by various organisms. Examination of acute catarrhs, as well as of the purulent and pseudo-membranous forms of conjunctivitis, shows that cases which are clinically indistinguishable may contain bacteria that are morphologically very different. It is further definitely proven that one organism may produce various types of conjunctivitis, according to the conditions present and to the virulence of the organism, and that certain forms may exist in the conjunctiva at times without causing any reaction. Much, therefore, depends on the individual constitution or predisposition of the person affected and the conditions present in the conjunctival sac at the time of infection.

We recognize, moreover, that certain micro-organisms are more independent of these conditions than others, and that the earlier division of the bacteria into those which are "conditionally contagious," such as staphylococci, streptococci, pneumococci and diphtheria bacilli, and those which are "unconditionally contagious," such as the Koch-Weeks bacillus, the diplobacillus of Morax and Axenfeld and the gonococcus must be still considered as practically correct, despite the occasional occurrence of the last named organisms (with the possible exception of the Koch-Weeks bacillus) on the normal conjunctiva. The special conditions which favor the growth of the various organisms have been developed in a series of valuable papers by Uhthoff,¹ Sourdille,² Lagrange,³ Wolkowitsch,⁴ Cramer,⁵ Lobanow⁶ and Römer.⁷ which have been critically reviewed by Professor Axenfeld.⁸

* Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

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2. Sourdille: Arch. d'Ophthal., vol. xiv, January, 1894.

3. Lagrange: Ann. d'Oculistique, vol. cxxi, p. 128.

4. Wolkowitsch: "Versuche über die Bedingungen der Infektion der Conjunctiva," Diss., St. Petersburg, 1899.

5. Cramer: Centbl. f. Gyn. No. 9, 1899.

6. Lobanow: Westnik ophth., vol. xvi, p. 560, 1899; also vol. xv, pp. 3 and 215.

7. Römer: Zeits. f. Hygiene, vol. xxxii, No. 2, 1899.

8. Axenfeld: Lubarsch and Ostertag's Ergebn. d. Allg. Path. u. path. Anat. d. Mens., 1899.