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Address.

ANCIENT AND MODERN CONCEPTION OF SYPHILIS.

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SECOND ANNUAL MEETING OF THE AMERICAN
MEDICAL ASSOCIATION.

WILLIAM L. BAUM, M.D.
CHICAGO.

During the centuries that have elapsed since syphilis was demarcated as a definite disorder nosologically, views have appeared, disappeared, and reappeared as to its origin and relation to other disorders. Dominance of judicial astrology, at the time of the Naples epidemic, led Steber, of Vienna, in 1494, to claim syphilis as a new disease, due to the conjunction of planets. Grünbeck, of Burkhausen, in 1496, charged the disease to the work of Saturn and Mars causing corruption of the blood and bile. Leoniceno, of Lombardy, about the same period, was skeptical as to the occult factors of the origin of the disease. He disbelieved in the origin in divine wrath against blasphemy, which led the emperor Maximilian to issue an edict. He also disbelieved in judicial astrology, and charged the epidemic to a certain unseasonableness of the air. He pointed out that in 1494 inundations occurred all over Europe, and that it was not surprising that in the wake of such phenomena the summer atmosphere acquired those hot and moist qualities which physicians and philosophers regard as the generating cause of all putrid germs. Inundations rapidly develop a general putrefaction of the air and soil. They may not only determine pestilential affections—*pestilentia*—like those in the 15th century, but also prepare for other diseases in the future.

Here, Leoniceno forms a conception of the relations of syphilis to general nosology, which has since maintained its own. While syphilis has since been endemic, it rarely assumes a type which could be denominated epidemic. About the time of Leoniceno, the view was entertained that syphilis was leprosy modified by coincident nosologic factors. Many 15th and 16th century physicians believed that syphilis arose from the stings of venomous insects. Indeed, Americus Vespucci claimed that the Indian women used venomous insects to stimulate the genitals of their lovers. In all probability, the peculiarly marked adenopathic character of the epidemic of the 15th century played a large part in lending credence to this venomous insect hypothesis. The adenopathic character of syphilis sometimes appears to-day to an extent that at once puzzles and interests the syphilographer.

No great epidemic has appeared since that of the 15th and 16th centuries. Epidemics of every disease,

in the 15th, 16th and 17th centuries, exhibited a decided adenopathic tendency. Constitutional peculiarities at that time doubtless played a large part as predisposing causes, just as the neuropathic tendency of the present day plays a large part in the production of the luetic neuroses.

About 1540, the furibund character of syphilis began to disappear. Probably inherited immunity played a part in this, as well as the fact that the Galenic physicians, stirred by the assaults of Paracelsus, took a more active part in treatment. Antoine Lecocq, in 1540, noticed that syphilis begun to lose its furibund, galloping character. Fracastor, at the same time, remarked that the disease had been markedly modified. Patients had but few pustules and slight shin pains; but more gummata were observed. The hair exhibited a greater tendency to fall out; sometimes the teeth became loose and fell out. The attention of Rabelais was early attracted to syphilis, because his generous disposition drew him toward this neglected class of patients. In 1538 he made great efforts to reform the treatment of these patients at Paris. Rabelais had "often seen syphilitics when greased with mercurial ointment; their faces on edge like a knife and their teeth clacking like the keyboard of a broken-down organ."

ETIOLOGY.

The germ, or animalcular theory of disease, began to assume prominence early in the 17th century. Blankard, a Hollander, had stated: "In the seed of men, and in that moist matter which women carry in their wombs and in their sheaths, are found small animals, which, being venomous, corrupt not only the genital parts, but even, growing in time to large quantities, thrust themselves everywhere in the blood." By the middle of the century even the clergymen were acquainted with this theory. Thus, commingled with the fetichism of Cotton Mather, is found a chapter on the animalcular origin of disease, at the end of which, in describing remedies for this supposed source of distempers, he remarks: "Mercury, we know thee! But we are afraid that thou, too, will kill us if we employ thee to kill them that kill us! And yet, for the cleansing of small blood vessels and making way for the free circulation of the blood and lymph there is nothing like mercurial deobstruents."

Ballay, in the 18th century, claimed that the iguana to which Mark Lister charged syphilis, contained a "small species of animal" which he called venereal virus. He states, much less logically than Mather but in accordance with a view now strongly dominant, that mercury would not have the virtue of curing lues, were it not kept up by small insects, visible only under the microscope. Thirty years before, Ballay, Didier and Desault had claimed that the venereal leven consisted of "imperceptible worms." Boerhaave strongly opposed.

and, in the opinion of his admirers, completely battered down the hypothesis of the imperceptible worm or animalcula.

The doctrine of disguised venereal diseases flourished. All unusual morbidities which could not be explained were attributed to concealed venereal disease without distinct symptoms. Furstenuau charged hysterical phenomena to the driving in of a venereal virus by badly-directed treatment. Rosen, in 1764, made himself the apostle of this doctrine and accepted as hereditary some symptoms of recent syphilis in two 30-year-old patients. Van Swieten, in refusing to admit the heredity of syphilis, momentarily checked this theory. Stoll restored it to its dominance and Fabre was one of its warmest partisans. To a certain extent, this belief was an outgrowth of the tendency to demarcate diathesis which marked the time. Hahnemann, under the influence of this tendency, with that curious distortion of logic which so often suggests in him, paranoiac twist, ignoring the demonstration of the parasitic origin of the itch, charged psora or scabies with being a diathetic state having much more dangerous consequences than syphilis. "This thousand-headed monster of disease does," he remarks,¹ "cause internal affections (after eruptions sometimes containing only a few vesicles), accompanied by intolerable, voluptuous itching, and a peculiar odor. The psora—itch—is the only real, fundamental cause and producer of all the other numerous, I might say innumerable causes of disease—hysteria, mania, epilepsy, convulsions of all sorts, softening of the bones, cancer, gout, jaundice, cyanosis, dropsy, amenorrhea, hemorrhage from the stomach, lungs, nose, bladder and womb, paralysis, and pains of a thousand kinds, etc.—that figure in systematic works on pathology, as peculiar and independent diseases." Despite the demonstration in his time of the itch insect, Hahnemann permanently stamped this etiologic theory into modern homeopathic nosology and therapeutics.

To a certain extent, as to-day, teleologic notions anent the duty of the physician to preach sermons on debauchery in lieu of studying disease, increased this belief in disguised syphilis. Clinical recognition of the anomalies of syphilis, moreover, leads to a bias in favor of syphilitic etiology. Ricord. Dr. Oliver Wendell Holmes remarks, was the "Voltaire of pelvic literature, a skeptic as to the morality of the race in general, who would have submitted Diana to treatment with his specifics and ordered a dose of blue pill for the vestal virgins." While Buret and others have taken up the cudgels strongly for the purely specific nature of syphilis, still the modern trend of opinion strongly favors this 18th century notion, cleared of obscurity by 19th century biochemistry. The toxin of syphilis is now recognized as producing effects non-specific in character and resistant to antiluetic treatment. Lues, like all the great contagions, is now known to produce arrests of development resultant in defective constitutions.

During the 19th century a singular swerving occurred in views held as to lues. While, at the outset of the century, lues was considered as a disease modified by the constitution which it attacked, and the condition of that constitution at the time at which it occurred, by the middle of the century it was looked upon as a disease *per se*, which had little or no relation to constitution or to the patient's condition when attacked. In this particular, opinion concerning it followed the same evolution as views of other contagious diseases.

The doctrine of specifics in therapy played no small part in determining this. Lues was likewise separated by nosologists from other diseases, on the teleologic ground that, not occurring in the lower animals, it was a product merely of human debauchery. This view of the disease appeared soon after the great epidemic of the 15th century. Many Galenic physicians, like too many English medical men of to-day, regarded it beneath their dignity to treat a disease of this kind. In England, despite the example of the great biologist, John Hunter, medical men still use venereal diseases merely as a starting point in practice. At the middle of the 18th century it was a common thing for beginners to establish dispensaries for this purpose. Smollett remarks, anent Fathom's attempt to secure practice: "The other means used to force trade, such as ordering himself to be called from church, alarming the neighborhood with knocking at his door at night, receiving sudden messages in places of resort and inserting his cures by way of news in daily papers had been so injudiciously hackneyed by every desperate sculler in physic, that they had lost their effect upon the public and therefore were excluded from the plan of our adventurer, whose scheme for the present was to exert himself in winning the favor of those sage sibyls who keep, as it were, the temple of medicine and admit the young priest to the service of the altar; but this he considered as a temporary project only, until he should have acquired interest enough to erect a hospital, lock, or infirmary, by the voluntary subscription of his friends—a scheme which had succeeded to a miracle with many of the profession who had raised themselves into notice upon the carcasses of the poor."

"Yet even this branch was already overstocked, inasmuch that almost every street was furnished with one of these charitable receptacles, which, instead of diminishing the taxes for the maintenance of the poor, encouraged the vulgar to be idle and dissolute by opening an asylum to them and their families from the diseases of poverty and intemperance; for it remains to be proved that the parish rates are decreased, the bills of mortality lessened, the people more numerous, or the streets less infested with beggars, notwithstanding the immense sums yearly granted by individuals for the relief of the indigent."

The "lock" was then, as now, in England, the appellation of a hospital for venereal diseases.

Among the factors charged with the creation of the epidemic in Naples, was bestiality. This opinion was based on a theory that morphology of the contagion is affected by a culture medium. This opinion, experiments of Dr. G. F. Lydston have shown, there is reason to believe, since morphology of both the streptococcus and the gonococcus may be affected by the culture medium. The changeable nature of the vaginal secretions and the difference between human and animal vaginal secretions, were believed to have originated by fermentation—the peculiar qualities of the epidemic lues of the 15th century. While it was long thought that venereal diseases were unknown and incommunicable to animals, investigations during the last half of the 19th century demonstrated the existence of an adenopathic epidemic disorder among horses, known as dourine, and also as *maladie du coit*. This disorder, as Dr. R. J. Withers demonstrated a decade ago, before the Chicago Academy of Medicine, is in many particulars akin to furibund, adenopathic syphilis. It seems to bear the same relation to human syphilis that acute tuberculosis

1. Organon, p. 113.

of cattle does to human tuberculosis. Some medical reports of the epidemic of the 15th century refer to syphilis among horses and cattle. Probably much of this was dourine, since horses were then brought in great numbers from Arabia and from North Africa, where dourine is comparatively common.

The 18th century was marked by clinical demarcations of the different diseases charged to venery. In the early part of the century the distinction between gonorrhea and the other diseases had been pointed out, and had even been used by Swift in his "Tale of a Tub"; still, the disorder remained unnamed until the close of the century, when Swediaur revived the term gonorrhea, under which title—as etymology shows—the Greeks had placed indifferently, blenorragia, prostatic discharges and spermatorrhea. Two years after Swediaur, however, Hunter attempted to demonstrate that gonorrhea and lues were the same disease, and, through an undiagnosed lues in a gonorrheic, seemingly proved it. Tode, just before Hunter, had denied the possibility of luetic infection from gonorrhea. Hunter's experiment demolished the position of Tode and pointed out once more that error always lies in absolute assertions. Bell, in 1793, demonstrated that while gonorrhea and lues occasionally complicated each other, they were distinct disorders. The demarcation between hard and soft chancre was not established until 1852, by Bassereau, a pupil of Ricod. This distinction, even yet, is not totally accepted in therapeutics.

The problems of syphilography for the 20th century, as outlined by syphilographers in the 19th century and remote past are:

1. The early diagnosis of the disease where primary sore is either not recognized, as in extra, genital syphilis, or where it is abnormal.

2. The determination as to what predisposition produces the serious nervous and other consequences of tertiary lues.

Arising from this problem comes a secondary one: To determine the predispositions leading to the parasymphiloses. The next thing is to determine the influence of other diseases, whether malign or benign, upon syphilis. The bacteriology and bacterio-morphology of lues and other venereal diseases remain to be worked out. Practically, here, in regard to lues, there is not much advance beyond the guesses of the 17th century. In dealing with bacterio-morphology, the culture medium furnished by various lymphatic systems of man and animals needs determination. Since dourine in epidemic type has frequently to be dealt with by state veterinarians, material can be procured which would throw the same light on lues that lung plague in cattle has thrown upon pneumonia, and that cattle tuberculosis has thrown upon phthisis. In therapy, the problem is to avoid excesses of mercurialization and iodization, to treat secondary mixed infections and toxemias, and to treat the general systemic nervous exhaustion as well as the mental state of the luetic patient. Syphilographers practically must recognize that co-existent syphilophobia is almost as much of a physical depressant as syphilis itself.

Culices Make War on Anopheles.—Sir William MacGregor, governor of Lagos, British West Africa, in a paper read at the British Medical Association, stated that he had placed twenty each of the larvæ of the culix and the anopheles together in water. The anopheles were soon destroyed by the culices, showing that the latter might be made use of as an exterminator of the malaria-propagating anopheles.

Original Articles.

INTRA-UTERINE AMPUTATIONS.

PROBABLY CAUSED BY FIBRIN ABNORMALLY PRESENT IN THE LIQUOR AMNII.*

J. MAHER, M.D.,
OAKLAND, CAL.

Intra-uterine amputations are of sufficiently frequent occurrence to excite professional curiosity as to the causes which produce them. I wish briefly to call your attention to a case which occurred in my practice, and I do so perhaps more for the purpose of seeking light than of exploiting a theory.

Two and a half years ago, while officiating as obstetrician, I found a baby which had just been born minus some fingers and toes. I did not know of the abnormality until my attention was called to it by the nurse on the occasion of my next visit, some fifteen hours after the birth. I then found constricting bands of what appeared to be dried fibrin encircling several of the fingers and toes, which were evidently doing the amputating.

After the constrictions had been removed some of the members in the course of time fell off, having been strangulated to such an extent that they could not recover. Others remained and still show very distinctly, as you see by the photographs, the marks of the constricting bands. Fingers which had already been amputated were undergoing re-amputation at points nearer their origin. In other cases two members were cut off by one constriction and at the same time united to each other at the point of amputation. This happened to the two fingers involved on the right hand, which were afterwards separated by the knife.

The baby which was the first one was normal in all other respects and is to-day strong and vigorous. The parents are healthy. Family history is good. The second baby, now a month old, was born in normal condition.

It is not my intention to theorize, but I am inclined to the opinion that the trouble in this case arose from the abnormal presence of fibrin in the liquor amnii.

The causes of intra-uterine amputations, as given by the text-books, are: amniotic bands, inflammations, intra-uterine fractures, and constrictions by the cord. It would seem reasonable also that the amniotic bands so called might be due to fibrin deposited upon a part from the liquor amnii in the same way that it is deposited by whipping fresh blood, constricting the part, causing arrest of development beyond the point of constriction, and subsequent amputation.

The liquor amnii during the first half of pregnancy being almost pure blood serum, this phenomenon might be caused in the same manner as thrombus, embolus, or heart-clot. The liquor amnii may be open to unknown sources of contamination or the accidental introduction of the so-called fibrin ferment and the membranes could offer but poor protection to a fluid so easily infected.

The exact origin of the amniotic bands is not stated in the books, but the majority of writers leave us to infer that they are all out-growths from the inner sur-

* Read at the Fifty-second Annual Meeting of the American Medical Association, in the Section on Obstetrics and Diseases of Women, and approved for publication by the Executive Committee of the Section: Drs. A. H. Cordier, W. E. B. Davis and Henry P. Newman.