PROPHYLAXIS IN THE CONTROL OF VENEREAL DISEASE

ITS DEVELOPMENT, ADMINISTRATION AND EFFECTS ON SOCIETY

by

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A THESIS SUBMITTED FOR THE DEGREE OF

DOCTOR OF MEDICINE

UNIVERSITY OF WISCONSIN

1933

INTRODUCTION

Venereal disease is a general term used to describe those diseases ordinarily obtained from impure sexual intercourse. The diseases are three in number, namely gonorrhea, syphilis and chancroid. Each disease has a distinct and separate etiological agent, although it is possible for one to suffer any two of the three, or all three diseases at one time due to contact with a person having more than one of these diseases. It is interesting to note that this fact played an important role in the history of syphilitic knowledge. In 1767 John Hunter inoculated himself with pus on the prepuce and glans from a virulent gonorrhea and developed a chancre as well as constitutional syphilis. He concluded that gonorrhea and syphilis were but different manifestations of the same disease and thereby throwing all the scientists upon the wrong track of scientific study. It required the epoch making work of Phillippe Ricord in 1831 to conclusively prove gonorrhea and syphilis were two separate diseases.

Venereal diseases are of interest to medical men not only because they are strictly diseases of man, but also because they are the most serious diseases to afflict him at the present time. It is true medicine has not mastered tuberculosis, but even so we have not failed utterly in preventing its spread. In the case of venereal diseases we seem to be helpless for they have continued their march through all the ranks of society as of old. A study of the incidence of communicable diseases in 1927 reveals syphilis superceded only by measles

and chicken pox. Gonorrhea is almost as common as measles and affects fifty to sixty per cent of males sometime in their life and is responsible for a great part of the gynecology and urology. They are, indeed, the problems of today. (1)

The manifestations and complications resulting from these diseases are manifold and involve all branches of medicine. It was Sir William Osler who said, "Know syphilis in all its manifestations and relations and all other things clinical will be added unto you".

It is generally agreed by most army medical officers that no group of diseases produces the morbidity, decrease in efficiency and loss of morale as these diseases. Colonel Mans, Chief Surgeon of the United States Army, states, "The demoralizing influences of alcoholism and desertion compare but feebly with the direful and far reaching results of diseases of this character".

If one considers the facts known about the venereal diseases one wonders why they should be the great problem confronting mankind today, when the etiological agents, their life history, diagnostic tests and laboratory aids are known. With syphilis we have had a specific treatment for eighteen years. What other group of diseases would have continued with so complete an armanentarium at hand?

Some one has said if venereal diseases were only coughed and sneezed, man would have wiped them out a long time ago, but since they are obtained usually through sexual irregularities little has been done

about them. To attack these diseases one should not only consider their communicability but also their moral implication. Since the 17th century these diseases have been considered shameful ones and, therefore, it is not surprising to find a human desire to avoid discovery of sex irregularity. Also, there is the attitude of certain classes of laymen who consider a person not a man, and at times a rustic, if he has not had a "dose of clap."

HISTORY OF GONORRHEA

Although the exact date of the origin of gonorrhea is unknown, it is believed by many historians to date from time immemorial. However, it is not until the book of Leviticus was written in the 15th century B.C. that we have the condition clearly indicated. Here Moses laid down the laws to be followed by those suffering from gonorrhea;

> "Speak unto the children of Israel and say unto them, When any man hath a running issue out of his flesh, Because of his issue he is unclean". Leviticus XV;2.

Moses, realizing the contagiousness of the disease from contact, ordered all infected persons to allow a full week to elapse before assuming his social functions.

The morbidity and economic loss resulting from gonorrhea, in ancient times, was great and in an effort to reduce it the Jews invented circumcision which reduced one of the most common complications of the disease - balanposthitis.

It was not until twelve centuries later, in 300 B.C., when Hippocrates wrote the first scientific document of gonorrhea that the condition was described in the literature. He called the condition Strangury, and apparently from his symptoms included cystitis. The etiology was due to renal suppuration, inflammation of bladder, urethra, womb and excessive indulgence of venus.

In the second century Galen coined the word gonorrhea from the Greek words 'yorn' meaning semen, and 'peiv', to flow. However,

the theory and description as given by Hippocrates was followed until the 9th century, when Rhases attempted to give a more accurate description of the disease and tried to differentiate it from cystitis. Rogers in the 13th century finally described gonorrhea as characterized by pain, burning, redness and swelling of penis with difficulty in urination. A contemporary of Rogers, Guellaume de Salicit, attributing the disease to filth in contact with dirty women, prescribed the first prophylaxis by advising thorough washing of penis and use of vinegar intraurethrally after questionable contact.

When the western civilization was suddenly struck by the great scourge, known as The Great Pox, the question arose if gonorrhea and syphilis were not but different manifestations of the same disease. Vigo made a clear distinction between the two diseases and science was at once on the right tract for helpful study of the diseases. However, Brassonale, a leader of medicine of those days, came to the conclusion the two diseases were merely different manifestations of the same disease. This statement was followed by the tragic inoculation experiments of John Hunter and for many years, even after Ricord's conclusive work, both laity and profession followed the thought of Hunter. The pathology of urethral inflammation made great strides under the leadership of Morgagni who showed the cause of the discharge and the importance of Lacunae of Morgagni to chronicity of disease.

In 1874 Neisser discovered the gonococcus and made the disease as an entity complete.

HISTORY OF SYPHILIS

Although there is some question as to the time and place of the origin of syphilis all authorities and historical records agree that syphilis in epidemic form first appeared in Europe in 1495. As Pusey states it, "It appeared on the stage of history with a dramatic suddenness - as a great plague sweeping the whole world before it in a few years". Most authorities feel that syphilis was introduced into Europe by sailors of Columbus after his first expedition to the West Indies.

The disease was first observed in Europe following the seige of Naples by Charles VIII and his mercenary army obtained from all parts of Western Europe. At that time Italy had degenerated to the height of effeminate luxury and was in a very weakened state, having little ability to stop the march of Charles' Army. As was customary in those days women followed the army so that once the disease was contracted it spread rapidly. Pusey described it in the following words: "Charles' march was more of a debauching rather than a military campaign". Charles' army remained in Naples from February 22, 1494 to May 20, 1495, when they became so weakned through disease and dissipation that the Neopolitans drove them out. His army disbanded and returned to their homes to disseminate the disease. At that time there was a lack of a common name for the disease and as it developed in the various countries it was given the name of the country from which it was obtained; thus in Italy it was called the French disease, in France the Neopolitan disease and the Portuguese called it the

Spanish disease. In Germany it was called the Pock disease and as it spread to Poland it was known as the German Disease. In Russia it was known as the Polish Disease.

The disease, has been assumed by some historians, to have existed in Europe and Asia previous to 1494, but a conscientious study of the ancient writings and archaeologic specimens have shown the disease considered syphilis really was not syphilis. Following the publication of a book by a Captain Duprey, in 1865, it was believed syphilis may have existed in China three thousand years ago. Okamma, a Japanese physician, on studying the book, Sin Wan, referred to by Captain Duprey, states the book refers only to an ulcer on the genitalia. His opinion that syphilis was introduced in Canton 1504 following the landing of a Portuguese ship. Adachi described syphilitic bones believed to be of stone age, 2500 years old. Dahi who studied these bones not only is certain they are not syphilitic but is also uncertain as to their antiquity.

There is no written evidence prior to 1495 of syphilis in Africa. The disease was introduced into Northern Africa by Italians and Spaniards.

G. Elliott Smith claims that in studying 30,000 mummies not once was there any evidence of syphilis. Williams, undertaking a study of the syphilitic bones in Europe supposedly buried before 1493, found that not one of them showed definite evidence of syphilis.

There is definite evidence to show that syphilis existed in

the Western Hemisphere at the time of Columbus' discovery and that his crew transported it to Spain. In the library of Seville old manuscripts tell how Columbus' crew on ariving in Haiti mingled freely with the friendly Indians. The disease was brought first to Barcelona where because of its loathsomeness it was called Serpentine Disease, an affliction breaking and rotting the bones. The chief of Spain sent missionaries to the New World to learn if the disease existed there and if it did to learn of their remedies. It was found to be prevalent in Haiti and Mexico among the Indians and colonists and was called Bubas.

The first person to describe and suggest the contagiousness of the syphilis was Girolamo Fracastora, physicist, astronomer, pathologist and poet, who wrote his famous poem in 1521. He is credited with having introduced the name syphilis.

The learned of that time avoided treating the disease, confessing they knew nothing about it and that it did not follow the galenical theory of disease. Little advancement was made in the study of syphilis until Morgagni, 1612-1771, made a thorough study on the bodies of syphilitics and published several papers on syphilitic organology.

In 1767 Hunter made his statement of syphilis and gonorrhea being manifestations of the same disease and also decried the involvement of internal organs for three centuries previously. In the second half of the 18th century hereditary syphilis was recognized by

numerous men.

Modern syphilis is said to have begun with Phillippe Ricord (1799-1889), an American studying in France. He established the anatomy of syphilis and gonorrhea and divided the disease into its three stages. He differentiated between soft and hard chancre.

Sometime back someone said "Whatever, its true story of origin, matters little for this scourge is now found in the palaces of the powerful, mansions of the wealthy, home of the merchant, and hovel of the slave. It respects neither rich nor poor, young or old, guilty or innocent."

PROGRESS OF PROPHYLAXIS

In the early centuries a person afflicted with venereal diseases and caught was either publicly whipped and then their body branded by a hot iron or were isolated on lonely islands for the remainder of their lives. Later isolation of patients in special hospitals was tried, in order to give proper treatment during the period of contagiousness, but this failed also.

The oldest record concerning prevention of venereal diseases is found in the book of Hundatus, article 138, in which is described the punishment meted out by the Persians to those suffering from these maladies. The hardships imposed were as follows: "The citizen who has leprosy or the white sickness may not come into a town or consort with other persons". It was believed people were only afflicted because they sinned in some manner against the sun. Any stranger with such diseases was driven out of the country. This method of procedure was followed throughout the biblical era and carried down through the middle ages with but slight modification.

An example of the restrictive measures used during the middle ages are the statutes decreed by Jane I, Queen of both Sicilies and also Countess of Provenance, who attempted to regulate the brothels at Avignon in 1347. The laws laid down are as taken from Astruc. V.I. pp. 53-54:

1. Wenches should not walk the streets but must stay in brothels and by way of distinction they should wear a red knot on their left shoulder.

2. If a girl breaks the above law she was to be led through the streets of the city, by beat of drum, a red knot hanging from her left shoulder. With the second offense she was to be lashed publicly or privately and then sent from the house.

3. No youth to have admittance to wenches without permission of Abbess or governess.

4. Every Saturday the women in the house were to be examined by both Abbess and Surgeon and if any contracted an illness through their prostituting they should be separated from the others, for fear any youth conversing with them should catch their distemper.

These regulations as laid down by Jane I were grossly unjust to the females of promiscuity, for those primarily guilty for the spread of the disease, by being the seekers, are not only allowed to go scot free but are also painted as "Lily White".

One hundred and fifty years later (in September 1447), because of the rapid widespread and numerous deaths produced by grandgor (syphilis) in Edinborough, James IV, King of Scotland, began promulgating laws and continued to the time of his death, in order to check the disease. He ordered all those infected to appear on the Sands of Lieth at 2 A.M. and be transported, by means of boats, to the Island of Inche where they were to remain until God cured them. Anyone found infected and who had not gone to the Island was to be burned on the cheek as a sign of their infection and guilt.

This action on the part of James IV was immediately followed by a proclamation in the Baso of Aberdeen in Britian which ordered all infected women to stop the spread of disease underpenalty.

Henry IV tried to curb prostitution in his military department by inflicting a fine equal to a month's pay if a harlot was found in his quarters. Also any common woman found by any man should have her money taken away, drive her out of the army and break her arm. All the harlots found contaminated in India were to have their heads shaved, white washed and a mark of disgrace placed on it.

In 1497 the Parliament of Paris issued a decree, which in part was as follows: "This day, the sixth of March, whereas there are many sick persons in the city of Paris infected with the disease called the Great Pox which for the past two years has spread very much in this kingdom, as well at Paris, as in other places, so that there is cause to fear its violence should increase more in the spring season, it is thought proper to make some provision against it". Ten regulations were then given directed especially toward isolation of the infected. All infected aliens in Paris were ordered to return to their native lands under penalty of death. Parisians infected were to lock themselves in their houses and never appear in public streets. In 1498 the Parisian parliament issued another decree which forebade any person with the disease to remain in Paris under penalty of being thrown into the river.

The very religious emperor Maxmillian of Hapsburg believed the outbreak of syphilis was the punishment given man for profaning the Lord's name and therefore when he came into power, in 1496, issued a decree punishing all people with the disease.

With the advent of the 20th century prophylaxis of venereal diseases has combined medical, legal, public health and social study aspects. The various governments and societies observed that the results obtained in the past centuries by use of arbitrary and punitive laws had failed utterly and took cognizance of the fact that human nature would not permit a person to give up his freedom to mingle with his fellowmen, or to allow a stigma be cast upon him or his family. Also it was realized that venereal diseases were not like other infectious diseases, as Small Pox or Typhoid Fever, which are very acute and either incapacitating or visible, but are subacute and easily hidden from others even in their infective stages. It was, therefore, not difficult to see that any method of prophylaxis which forces the patient into the open only succeeded in driving them under the cover of drug stores, charlatans, unscrupulous physicians or received no treatment at all. Punitive methods should be used, if prophylactic methods were to be effective, only as a last resort. Progress depended first on a better knowledge of pathogeny, treatment, and the dangers resulting from venereal diseases; second, on a gradual elevation of public morals concerning matters of sex; third, on improved conditions of personal hygiene among civilized races; fourth, to remove the stigma against the disease and treatment of diseased persons as a patient and not as a defendant in court.

The first attempt to form a real campaign against venereal diseases was in 1898 when all the important nations sent delegates to the Hague to discuss methods and means of fighting the diseases.

No definite action was taken at that time although a set of resolutions was drawn up and recommended to the nations of the world, as follows:

1. Governments should use their utmost powers in suppressing prostitution of girls under age.

2. Complete and compulsory course of venerealogy be instituted in every University.

3. Guardians of orphans and others charged with the education of the young, should use every effort to promote their moral development and to teach them temperance and respect for women of all classes.

4. The utmost regard of the law should be enforced.

5. The Governments appoint committees to study the statistics, to inquire into the existing means of treatment and to study methods of prophylaxis.

6. Sex education on the part of the governments.

In 1913 a royal commission was set up to inquire into "The prevalence of venereal diseases in the United Kingdom, their effects on the health of the community and the means by which those effects be alleviated or prevented". The commission made a thorough study and reported in 1916. Their recommendations were acted upon by the local governments, Board of England and Wales and passed. The public measures for combatting venereal diseases in England and Scotland are as follows:

1. It is forbidden for anyone but registered medical practitioners to treat infected persons, to advertise or sell to the lay public any remedies for treatment or prevention of venereal diseases.

2. There are fourteen outlines for the care and treatment of infected females.

3. There are 7 institutions for the care of infected pregnant females.

4. Treatment of venereal disease may be obtained in institutions.

5. Salvarsan compounds will be given free of charge to practitioners qualified to administer them.

6. Laboratory tests done free in 73 laboratories.

7. There has been formed the British Social Hygiene course to educate the people as to the dangers of venereal diseases and the importance of early and continued treatment.

In addition there has been provided 143 centers in hospitals for the treatment of persons suffering from venereal diseases, free of charge.

By some it was believed the measures suggested were not radical enough.

As early as 1912 there were many small organizations in the United States dealing with venereal diseases. In 1914 it was recognized that any plan to successfully combat venereal disease must come from a strong central source which would combine the social and legal with the medical and public health aspects. As a result all these small organizations were combined into the American Social Hygiene Association. They worked hand in hand with the United States Public Health Department. With the entry of the United States into the World War, the medical services of an Army and Navy together with the United States Public Health and American Social Hygienic Association produced a plan of control. There were three main groups of measures- Educational, Medical and Legal and Protective. This program produced

the highest peak of effectiveness ever known in the United States, but because it entailed too great an expenditure it was dropped. As a result the incidence of venereal disease increased after the war. We have not at the present time as low an incidence of infection as we did during the war either in the army or in civil life.

The Germans on October 1, 1927 enacted a law placing venereal disease prophylaxis and treatment under government control. It is probably the nearest advance toward the ideal method of meeting the problem. They have learned that venereal diseases constitute a family problem. They preach chastity but give detailed information as to prophylaxis. They have lost hope in expecting all humans to overcome the sexual desire temptation. Investigations of girls are made by reports brought into the bureau. Anyone may report the infected, even the girl's family, but all reports must be signed. Every safeguard is used to protect the girl's character.

The German cities and communities have bureaus of health and information bureaus. The essentials of its success depends on:

1. Discourages and penalizes concealment.
2. Encourages cooperation on part of those infected.
3. Encourages exact diagnosis.
4. By booklets and literature furnished to anyone desirous is told what every one should know about such things.

They realize success cannot be obtained unless one has the

interested cooperation of the masses.

METHODS OF PROPHYLAXIS

1. Continence
2. Mechanical prophylactics
3. Chemicals
   a. Soap and water
   b. Drugs for syphilis - calomel 30%
   c. Gonogoccocides:-
      1. Ag. Nuclunate 10% (Argyrol)
      2. Protargol 2%
      3. Mercurochrome
      4. Potassium Permanganate 1:3000
      5. Hexylresorcinal 25%
4. Control of Prostitution
5. Education of Adults and Adolescent
6. Treatment of syphilitic mothers in pregnancy
7. Early diagnosis and immediate treatment .
   a. Place of clinics and epidemiological methods.

1. Continence.

The only positive and sure method of preventing venereal diseases is by the practice of continence. But, can this be practiced by all men? On one hand we have social workers and some doctors who believe that sexual intercourse is not essential to perfect health. Professor Lionel S. Beale of King's College, London, says "It cannot be too emphatically stated that the strictest continence and purity are in harmony with physiological, physical and moral laws and that yielding to the desires, the passions and inclination cannot be justified on physiological, physical or moral grounds." Sir William

Gowers of London, the famous neurologist, believes no man was ever the better, even to the slightest degree, for incontinence and that for it men are worse morally and most men much worse physically.

On theother hand, we have the other school which includes numerous medical men who believe the proceedure is easy for some to follow but extremely difficult, if not impossible, for others. Many agree with the W. S. Pugh's statement "sexual contact is a physiologic function". They feel it is nice for moralists to idealize continence, but one must recognize the truth and realize sexual instinct is possessed by all men and women and that a proper sexual life is a necessary part for the well being of a person. They also point out if a regular sexual existence is not obtained people become irritable and impossible. As an example the sailor, after a long voyage, is hard to please, grumbles and at times mutinizes, but after a landing in port they calm down and are more agreeable.

2. Mechanical Prophylactics.

Probably one of the most effective measures which can be adopted by the public is preventing venereal diseases, but which is rarely mentioned in the literature, is mechanical prophylaxis. This method should be encouraged more and would be a valuable adjunct to other methods of prevention. True, it has failed in numerous instances but the failures are chiefly due to neglect in use. The two most common mechanical means of prevention are the rubber condom and the skin sheath.

3. Chemicals.

The opposing factions in the use of chemical prophylaxis have waged wordy wars with both groups having the same benevolent aim- the prevention of venereal diseases. The opponents of this method of prophylaxis believe the dissemination of this knowledge may tempt many virtuous men and women to promiscuity and in so doing may even increase the incidence of venereal diseases. However, it is felt this view is based on the erroneous assumption that the majority of people remain chaste because they fear infection. This is not true for traits in human character play a large part in the human race. A normal or superior person will build a defense no matter how great the temptation; whereas, the mentally inferior person even though he fears infection will succumb to temptation or allow himself to be cajoled for their will power and determination is not strong.

The proponents of chemical prophylaxis held that we must face facts and not ideals. Promiscuity has been as old as the hills and will continue to exist no matter what the ideals or penalties may be. The proponents of chemical prevention have no quarrel with the teaching of sex idealism but they feel the two methods should be used together.

In 1906 Metchnikoff and Roux announced to the world that certain mercurial salts in an ointment would if used within a reasonably short time after exposure, would kill the syphilitic organisms, It was also shown it was effective as a gonococcocide. Evidence has shown chemical measures, if applied intelligently immediately after

intercourse, would reduce the incidence of infection to a minimum. However, inas much as sexual intercourse is often indulged in while under the influence of liquor, the incidence in these cases is increased, probably either through lowered resistance or to haphazard application of the prophylaxis.

This method of prophylaxis has proven more efficient with men and especially has it been of value where competent men, as in the army and navy, have been able to instruct the men individually and force its use. The application of this method of prevention has been much more difficult in women and is complicated by the various classes of women to be protected. The prostitute plying her trade under the cheapest and most sordid conditions has little inclination to cooperate; the clandestine, fearing discovery, is difficult to reach for advice; the inmates of the higher class houses cannot afford to offend their patrons who may be infected or adopt measures to protect others; the married woman is usually kept ignorant of the danger from her husband who has become infected.

In 1905 Major Henry I. Raymond furnished each soldier at the Columbus, Ohio, barracks with a unit called the "K" pocket which consisted of a small bag of blue ointmnet, a vial containing 2 ccs. of a 5% solution protargol and a medicine dropper. Although this prescription was satisfactory, the results as a whole were poor as the men would not generally use them. In 1921 chemical prophylaxis became compulsory and to make certain there would be no failure as previously it was decided to treat the men at the barracks. In 1931 Ashford at

the Hawaii base decided to continue to give the men individual prophylaxis packets and also treat them at the prophylactic stations of the barracks. The incidence of venereal disease was not decreased but every case developed was a case of gonorrhea and not one case of syphilis developed.

The chemicals used in prophylaxis of syphilis consists of calomel, usually in 30-35%, in a lanolin ointment. The external genitalia is thoroughly anointed and the ointment allowed to remain for some hours. The gonococcocides used vary and include most of the antiseptics known. The most common are 2-5% protargol, 1-1000 Hg.Cl. 10% argyrol, Margol jelly, 2% camphor, 3% phenol, 1-3000 potassium permanganate and 2% mercurochrome. In attempting to discover a gonococcocide which did not pain or stain clothing, Ashford and Hathway, experimented with Hexylresorcinal and found a 25% solution not only was free from pain and staining properties, but was more efficient than 2% protargol. All gonococcocides are instilled and maintained within the urethra for five minutes.

4. Control of Prostitution.

The question of state control of prostitutes has brought many arguments pro and con from the most eminent authorities. Which ever school one sides with he will find many difficulties each step he undertakes to defend. The ardent exponents of complete abolition of prostitution claims it drags three evils in its wake. The first is the seduction of immature boys; the second is the spread of venereal disease; and the third is the unfairness of the treatment to the prosti-

tute herself. As W. O. Henry puts it, "Scattered throughout the city, living in various tenements and apartments, the priestesses of Venus, by their solicitations, importunities and other practices excite the libido sexualis of the young, innocent boys and many of these are drawn into intercourse at a very early age often to their permanent physical ruin". Von During, opposed to state regulations, summed the objections to it as follows:

1. Medical supervision is necessarily incomplete and gains a false sense of security.
2. The state should take no hand in it as it is an industry leading to misery.
3. The number of prostitutes in a community cannot be estimated and at the present time most of them are clandestine and to control them is absurd.
4. State reulation is contrary to the constitution of government's forbidding pandering.
5. Brothels are a danger to the state. They are morally unsound and entice youth, teaching them illegitimate intercourse is safe. They offer allurement particularly to the unripe youth and to the intoxicated. They mean slavery for the inmates and are breeding places for sexual perversions.
6. Examination of prostitutes is unjust as it excludes only the women.

The proponents of state control of prostitution state that all attempts on the part of the law, police and well meaning societies to abolish prostitution has met with failure in checking venereal diseases. In the first place sexual desire is a primal instinct in man and no legislation is going to prevent him from satisfying his desires. Therefore, with the abolition of the old prostitutes and red light districts the sex problem adapted itself to the changes and from it has evolved the clandestine and amateur who are more vicious because of their ignorance. As Hennessey ably states it, "She is young, pretty and attractive and bearing no resemblance to the worn out prematurely aged hag who eked out a miserable living soliciting on the streets. Her conduct is as exemplary as that of any young miss out shopping or walking, She dresses stylishly, is neither more nor less lavish in use of henna, lip stick, rouge than her respectable sister - indeed, it is difficult to tell them apart."

In the second place, when some decades ago prostitution was the sole business exploiting the sex instinct today, we find innumerable places where the sex desires are aroused. Our modern dance halls withits warm, glimmerling lights and its young folks dancing cheek to cheek in close embrace to the soft languorous intonations of the saxophone and incessant teasing of jazz music cunningly devised to appeal to the sexual desires. The modern dress of women, altho it contains the advantages in health and style looked forward to for years, gives many young women an opportunity to commercialize their charms. The movie industry has always prospered on sex subjects.

Sex magazines, novels and newspapers are always the best sellers because of their sex gratification.

The problems of public prostitution will always be with us. We must reconcile ourselves to the fact that although the number of prostitutes may be decreased there will always be the hardened wrongdoer with whom nothing will ever be accomplished. Fournier, recognizing the deficiency and limitations of state control, believes that experience has shown these ought to be under state control.

To sum up the situation of prostitution one may take the words of Dr. Hunt, Prefect of Police and Surgeon in Belgium, who at the League of Nations conference at the Hague said, "The practice of clandestine prostitution cannot be estimated, and is on the increase. You ask me if the laws of regulation work and I reply - No, No, No.

Since control or abolition at the present time offers little or no way in the solution of the problem the methods to consider are chemical, educational, early treatment and epidemiological methods of prophylaxis.

5. Education of Adults and Adolescents.

Many social workers believe that since spread of venereal diseases are due to ignorance of the populace or insufficient knowledge concerning sexual life and its dangers, that education alone would check them. Their contention is if young people were aware of the dangers of premature or unclean sexual relationx they would probably take better care of themselves. However, there is the other

group of workers who are as firm in stating education will aid but little in preventing venereal diseases. In their opinion too many lectures have been delivered throughout the country painting the evils of venereal diseases in order to build up a fear. The church has for centuries tried to stop the progress of these diseases by inculcating fear and have failed. The lectures merely go in one ear and out the other . The world is made up of different sorts of people and some will always drink and forget the lectures while others will debauch no matter how much education they are given. It is surprising to note how many of the intelligentsia belongs to the latter class and are opposed to education since it hampers with their ideas of the liberties of life they are entitled.

As one studies the question he cannot help but feel that altho sex education will not be as large a factor in preventing venereal diseases as it followers would want us to believe, it nevertheless has its fine points and is of great value. It is common knowledge the laity is alarmingly poorly informed on these diseases and whatever knowledge they do have usually is obtained from quacks. The dangers should be made a matter of common knowledge. It is true the diseases will not be completely checked but a few people will benefit and be protected from these diseases. Everyone recognizes the tragedy when a person contracts any one of these diseases innocently or when he could have prevented them had he either known of their evils or protected himself and thus prevented the disease. Osler said, "Do not let them learn by the price of experience".

If we admit there is some value to education then when and how should the laity be educated? Will there be, as some believe if the dangers of venereal disease were pointed out early, a danger of arousing in youngsters sexual excitement and thereby producing more damage than good? Most young people know something of sex education at puberty and it is far less dangerous and more sensible to have sex education given by competent persons in a desired manner than to have it come from unauthorized persons as school mates, servants, etc.

Perhaps instructions should start when the child is first sex conscious, and in the majority of children, it is at the age of nine. The subject should be treated in a general way, using biological history of plants and animals and finally leading to human reproduction in a way not too literal or too personal. One must remember the first impressions are the most lasting and therefore to have distorted facts given by outsiders first are to be avoided. At the age of puberty the child should be acquainted with venereals diseases and sex hygiene. The proper place for such instructions is not the lecture room or the school room, for the proper reverence cannot be attained, but in giving individual instructions. The teachings should attempt to emphasize the rewards of strength and virtue rather than the penalties of weakness and vice. To be truthful and xtraight forward in the talks will yield greater rewardx, for the truth will finally be learned by the children. The dangers of prostitution should be pointed out, for statistical studies have shown

venereal diseases have been contracted, for the greater part, during the years of inexperience. The youth should be made to recognize the association of excess alcohol to contraction of these diseases.

The persons to impart this knowledge should have two qualifications, namely knowledge of the diseases and an impressive personality. Undoubtedly the best man to fill the position is a doctor, as he is respected and looked up to by the young for his knowledge of disease and his dignity. However, a parent, teacher or minister may qualify although it is somewhat more difficult for them.

The idea of educating first developed in this country with the opening of the World War, but after the war the United States dropped in and has since been picked up by Europe and South America. It consisted in publishing and distributing leaflets, showing lantern slides and movies, addressing Parent-Teacher Leagues and lecturing to social workers. They showed methods of prevention, and the results and complications of venereal disease. In so doing they hoped to lower the incidence and if contracted the cases would be brought in earlier and thereby the early manifestations and late effects.

6. Treatment of Syphilitic Mothers in Pregnancy.

The terrible wastage of life due to syphilis is far more than it had been imagined. Statistics show that of every four pregnancies less than two are born living. Of those surviving the greater majority are tragedies and are marked by the stigmata of inherited syphilis. Many American and European authorities feel that prenatal syphilis can

be completely eradicated. Lawrence has shown, in a series of cases, that with proper treatment of the mother during pregnancy, prenatal lues can be prevented. He also observed in mothers receiving no treatment during pregnancy over 80% of the children had signs of inherited syphilis. At the Royal Free Hospital of London there have been no stillbirths, due to lues, or syphilitic infants delivered of adequately treated mothers for the five years prior to 1931. Contrast this with the number of deaths produced in England and Wales where over 20% of the foetal deaths were attributed to syphilis.

It is the concensus of opinion the best results are obtained when treatment in the mother is instituted early in pregnancy and continued to the termination. Effectiveness in treatment declines rapidly after the fifth month of pregnancy and treatment started during the last months seems of little purpose other than protecting the obstetrician.

The treatment, as Lawrence advises, consists of eight intravenous injections of arsphenamine given weekly and fifteen intramuscular injections of mercury also weekly. While mercury and arsphenamine are given simultaneously they are not administered on the same day but three or four days apart. After fifteen injections of mercury a rest period of a month or six weeks is allowed and then a repetition of the two drugs. The amount of arsphenamine used is .1 gm. for each thirty pounds.

7. Early Diagnosis and Immediate Treatment.

Modern medicine has learned early diagnosis and immediate treatment constitutes one of our foremost lines of attack in controlling the spread of infections of any diseases. Particularly should this be true in our war against venereal diseases, for they are transmitted, for the most part, in the early stages. Early treatment of the infected would prevent the possibility of their spreading the disease to other people. Studies have also shown where the chances of permanent cure, in syphilis, are increased thirty five per cent with early treatment.

The early diagnosis of gonorrhea is relatively easy, by applying the gram stain to a smear and finding the gm negative diplococci, but the early detection of syphilis, before the blood serologic tests become positive, is difficult and the complex laboratory technique usually is not at the disposal of the physician. The only practical methods of examination are the dark field and the Kline slide precipitation tests. It is hoped the near future will bring forth a method of detecting the spirochaeta-pallida by such simple routine tests, which would be usable to all medical men, as are urinalyses and blood counts.

Although they are fundamentally alike, early treatment of syphilis varies with the different schools by using arsphenamine or one of its derivatives and a heavy metal, usually bismuth. They are given in conservative dosages and administered simultaneously. The conception of the short abortive course is absolete. Once the diagnosis of early syphilis is made the treatment is long continued and unin-

terrupted. Anything short of an intensive approach paves the way for relapse and the tragic late effects of uncontrolled visceral involvement.

In order that medical prophylaxis have any effect it is essential facilities be available for diagnosis and treatment which are adequate, easily available and free when necessary. In 1931 there were 671 clinics in this country treating venereal diseases. Of these 445 were receiving state aid. However, 70% of the infected in the United States are in the hands of the private practitioner, of which 85% are in the hands of semi-specialists. Europe responded, on the other hand, by forming centralized centers. They depend on the clinic as against the practitioner. Then, the method of treatment is determined by a centralized group, who because they are continually studying the problem, can give the infected the most modern treatment. Jeansellme summarized the individual practitioner type of treatment as, "The vagary chasing of the practitioner, trying this drug and that method on an 'I had a case basis', the disposition of the doctor and the patient to unite on insufficient and symptomatic treatment; and the mistaken use of bismuth to replace arsphenamine in early syphilis".

There is no doubt semi-specialists will improve their technique and knowledge of treatment of venereal diseases, but the questinn is will they improve fast enough and can the sum total of improvement equal that of clinics supported by the state. Many think not. The clinics of Europe have produced a reduction, whereas the United States

shows but little change.

Up to the present time little attention has been placed upon the use of epidemological methods in fighting venereal diseases. Every case known and properly cared for is a focus of infection neutralized. It is not possible to control any communicable disease without knowledge of its source and it removal. If every case were worked up, investigated and proper attention placed on contacts as in other diseases, venereal infections would shortly be under control. However, in doing epidemological work in syphilis and gonorrhea one must be bold and determined. At the same time the epidemiologist must have the cooperation and assistance of the state, clinics, legal departments, social workers and the private practitioners. With their aid the epidemiologist can trace down the sources of the disease amd have them properly treated. As evidence of this William L. Munson cites three instances in different cities of Massachusetts where he was called because of a sudden flare up in positive Wassermanns. In each instance he was able to trace the source and force them to submit to treatment.

RESULTS

In studying the results obtained from the widespread use of prophylaxis knowledge of venereal diseases one early recognizes all ever present to render statistics inaccurate, although they form a working basis for comparative study. One must always keep in mind those cases never diagnosed or treated or those cases which frequently there is an absence of signs. Then there is always a percentage of cases never reported dur to the reticense of both patient and physician.

Statistics previous to 1920 were extremely inaccurate. Probably the best study may be obtained from army records. The United States Marine Hospital, where from 30,000 to 50,000 patients were treated yearly, showed between 1880-1890 an average incidence of 8.5% per 1,000. From 1910 the incidence progressively decreased so that in 1914 it was 6 per 1,000. Probably the lowest incidence of venereal disease in the United States was reached at the close of the World War when the prophylaxis campaign and propaganda was at its height. With the close of the war the government dropped the campaign, since it entailed too great a cost. Suddenly there was a sharp increase in infections and by 1924 it had reached its crest. It was now evident to all officials of state, city and private that man's greatest enemy, if not destroyed, should at least be controlled.

In the past five years efforts have been made to standardize surveys not only to determine the actual number of cases under treatment in a community at any given time, but also to serve in the future

as a base line from which it may act as a guide in any changes to be made in prevention work. The questionaire formed has been used in all communities where surveys have been made. The first survey was in Detroit, on May 15, 1932. It showed that 16,735 cases of venereal disease were reported under observation or treatment in Detroit, or a rate of 13.46 cases per thousand. Of the total reported 8,665 were syphilis or a rate of 6.98 cases per 1,000 and 8,070 were gonorrhea, or 6.50 per thousand population. Over 95% of the cases were persons 16 years of age or over. It was also learned only 9,375 of the 16,735 had been reported to the health department.

The second survey was carried on in Kansas on June 1, 1927 Three thousand and thirty five cases of venereal diseases were reported, or a rate of 5.29 per thousand population. Of the total cases reported 1,860 were gonorrhea, or 3.14 per thousand population and 1,275 were syphilis, or 2.15 per thousand population.

The third survey included fourteen communities of four states, West Virginia, Kentucky, Illinois and Arkansas, whose combined pppulation totaled 619,126. The number of venereal infections reported were 7,184 or 11.60 per 1,000. Of the total reported 3,069 were due to gonorrhea, or 4.96 per 1,000 and 4,115 were syphilis, or 6.65 per 1,000.

Dr. Thomas Parran studying the incidence of syphilis in fourteen communities, whose total population was 25,822,137 and typical of the country, revealed that 110,039 cases were constantly under treat-

ment or 4.26 per thousand population. Using these figures as a basis, one could conclude there are more than one-half million people in the United States constantly under treatment. A brief resume of Dr. Parran's survey can be gleaned from the following table.

Locality	Total Cases	Total Rate	Early Cases	Early Rate	Late Cases	Late Rate
Tenn.(34 counties)	6,323	4.42	2,438	1.70	3,885	2.72
Oregon	2,104	2.40	609	.69	1,495	1.70
Detroit	8,754	6.22	2,898	2.10	5,676	4.12
Miss.(16 counties)	2,225	3.99	959	1.72	1,266	2.66
Cleveland	6,395	6.03	2,581	2.24	4,354	3.78
Virginia (18 ")	4,753	3.97	1,775	1.48	2,978	2.48
Iowa	2,990	1.23	1,244	.51	1,746	.72
St.Louis(5 counties)	8,293	6.44	2,386	1.85	5,907	4.59
New York(exc.N.Y.C)	14,476	2.63	4,139	.75	10, 337	1.88
Philadelphia	9,082	4.40	2,702	1.31	6,320	3.09
New York City	24,423	4.90	7,064	1.18	22,359	3.72
14 Communities	4,115	6.71	1,428	2.31	2,227	4.40
TOTAL	99,333	4.05	30,223	1.23	69,110	2.82

In all these surveys the doctor's opinion was asked as to the decrease or increase of venereal diseases. An increase was reported by those doctors who treated many more cases than the others. Those treating the least stated there was a decrease in number of infections. All clinicians, however, agree that congenital lues is decreasing.

The various military posts have proven how the use of prophylaxis, if used correctly, can reduce the incidence of venereal diseases. At Portsmouth the sharp decline following the use of prophylaxis was striking. Whereas, those attempting to use no preventive showed a rate percentage of 45.5 to 58% of the total number infected, while the group using a prophylaxis within a reasonable time after exposure had a rate percentage ranging from 6 to 12%.

Ashford in testing the efficacy of calomel ointment found that of the 9,726 men using this prophylaxis only .25 of 1% developed venereal disease. Later, using hexylresorcinal 25% he obtained the same results. A comparison of the Hawaiian and Panama basins, which are geographically in the same zones, showed that although both basins in 1927 reported about 50 infections per 1,000 in 1930 the Hawaiian basin reported 20 per 1,000 whereas Panama still reported an incidence of 50 per 1,000. The explanation for this is in the prompt and efficient use of prophylaxis in the Hawaiian basin.

Statistics in the various countries of Europe show they have been more successful in coping with the venereal problem. Every country has appointed a committee to study the sex problem in the hope of controlling venereal disease and prostitution. As evidence of the effectiveness of British anti-venereal campaign we find that although the total attendance in clinics has increased the number of new cases of gonorrhea and syphilis have decreased since 1918:

Clinics	113 in 1917	195 in 1925
Total attendance	204,692	1,719,148

New Cases Syphilis 26,912 (1918) 42,134 (1919) and 22,588 (1925).

T. B. Shaw, surgeon commander of the British Navy indicated the value of preventitive methods when he showed a steady decrease in incidence from 1910 to 1915. There was a slight rise in 1916-1917 as expected due to sudden expansion of the Navy. The rise was chief ly due to gonorrhea.

1900-1909	119	per thousand
1910	118	" "
1911	114	" "
1912	106	" "
1913	93	" "
1914	73	" "
1915	67	" "
1916	80.67	" "
1917	80.81	" "

From 1919 to 1927 reports from France, parts of Germany, Switzerland and Turkey showed a decrease of one-half in the number of syphilis. There has been a decrease of three-fourths in Sweden, Denmark, Belgium and Holland rates the lowest in incidence figures. Jadasshohn in surveying sixteen countries states there is neither a decrease nor an increase in gonorrhea.

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May. 15th. 1933.