SPECIAL ARTICLE

VENEREOLOGY DYING BUT NOT VENEREAL DISEASES*

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It would appear that specialisation in medicine is as old as civilisation. According to Herodotus, in ancient Egypt, each physician applied himself to the study and treatment of one disease only (Galdston, 1958). Down the ages, upto recent times, the lithotomist, the bone-setter, the lenscoucher, the fistula-mender, the pox doctor the clap doctor, had plied their specialties. Although many of them were quacks, mountebanks and sharpers of every kind and variety, there were also men and women among them possessed of high skill, fine dexterity and of much practical wisdom. It is related that in ancient Egypt, one of the Pharaohs suffered from a urethral discharge. The urine specialist was called in and he gave a prescription in which, the urine of a wife faithful to her husband was one of the ingredients. The Papyrus tells the story, how for 10 long years, the myrmidons of the Pharaoh searched and searched in the four corners of the Kingdom, and at last succeeded in getting a specimen of the urine from a faithful chaste wife, who on further examination turned out to be a virgin. This is a measure not only of the nature. of therapeutics extant in those distant historical periods but also of the state of immorality and sex laxity prevalent. From the 15th to 18th centuries, venereal disease as a specialty was practised solely by quacks, bath attenders, among whom there was a significant number of itinerant female venereologists. The term 'quack' originated in the word *quacksilber*, the German for mercury, with which syphilis was originally treated. The educated physician of the Galenical School regarded the treatment of these diseases beneath their dignity. With the spread of syphilis in Europe the treatment of the disease was organised and regulated in all the merchant towns of Germany, France, Italy and England and for some unknown reason women specialists were preferred for appointment as they were considered superior and better skilled in the technique of administration of mercury in its various forms (Schonfeld, 1952).

It is a matter of historical record that during the great plague of London, the prostitutes were the only people who never left London and who were kept busy, because a rumour began to spread that the surest protection against plague was the acquisition of a venereal disease and the whore houses of London were open 24 hours a day. Harlots and customers often died together locked in a last embrace (Winsor, 1950).

For over 400 years before the penicillin era, and to take syphilis as the major disease in the venereal group, no other communicable disease of man had been such a fascinating field of study as syphilis, not only among physicians,

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pathologists and immunologists but also among poets, dramatists, social historians and social scientists. Dubos (1950), quoted by Moore (1951), writing about tuberculosis and syphilis, seems to imply that western civilisation took syphilis in its stride and learned to live with it. The widespread contagion may have made European culture burn with a brighter light if it be true as claimed by certain medical writers that a correlation exists between syphilis and genius. The fathers of modern medicine of the later half of the 18th and the whole of the 19th century had described, delineated, classified and comprehended the entire range of the clinical manifestations of syphilis and gonorrhoea with their unrivalled capacity for observation and record. During the first half of the present century it is common knowledge that the great discoveries in the aetiology, laboratory diagnosis, epidemiology and therapeutics of syphilis and gonorrhoea have been unequalled by that of any other infectious disease. The study of syphilis besides benefiting it has contributed to parallel advances in other fields of medicine. Chemotherapy started with a quest for the cure of syphilis, has now embraced the entire domain of infectious diseases. In the earlier decades of the present century and during the closing years of the last century, venereal diseases were mainly practised by general physicians, surgeons and dermatologists as part of clinical medicine and surgery. But with the relisation of the necessity of control of these diseases, by medical, public health, educational and social measures, the speciality of venereology was born about 40 years ago. Organisation of diagnostic and treatment centres, patient education. epidemiological investigation of contacts, serological screening of strategic groups of population, mitigation of social and economic factors are the several measures for the cure and control of these diseases. By the application of these principles and methods, the European and American nations have achieved a progressive decline in the incidence and prevalence of these diseases (Moore, 1951). Side by side with the control measures a considerable amount of research on the several facets on the V. D. problem were carried out by clinicians, microbiologists and epidemiologists.

The accelerated and precipitous decline in syphilis incidence among the population of Western Europe and America is a phenomenon of the postwar era. The advent of penicillin coupled with an intense educational campaign and the application of public health principles of preventive control has played the star role in the spectacular decline of the disease. It is established that penicillin is curative in early syphilis, preventive of prenatal syphilis, abortive during the incubation period of the disease, and prophylactic before exposure to infection. The widespread use of penicillin in these countries for a variety of non-syphilitic conditions from a common cold to every conceivable ailment has had a profound influence in aborting and preventing the potential syphilitic infections in the population. Such 'happenstance' treatment is credited as one of the factors in the reduction of early symptomatic syphilis. Another factor of importance in bringing penicillin by chance to the unrecognised syphilitic is gonorrhoea. The treatment for gonorrhoea which has not shown a significant decline in these countries may

be a factor in lowering the syphilis attack rate, through administration of penicillin for gonorrhoea to a large number of persons of these socio-economic groups, of the population where syphilis most frequently occurs (Schamberg, 1956).

A plausible explanation is offered for the failure of gonorrhoea to decrease comparable to the decline of syphilis in America and other Western countries, to the shorter incubation period of gonorrhoea in men. If the incubation period of syphilis is taken as two months and that of gonorrhoea as 4 days and if it is assumed that the average person received one injection of penicillin per year, for a disease other than venereal, then the chance of receiving penicillin after infection and before diagnosis would be 1 in 6 in sypnilis and 1 in 91 for gonorrhoea. It is therefore inferred that coincidental penicillin is more likely to abort an unrecognised and undiscovered syphilis than gonorrhoea (Schamberg, *l. c. cit.*).

It would appear according to Moore (1956) that in the current antibiotic era, the venereologist finds himself in the unenviable position of having worked himself out of a job, in the youngest speciality barely 4 decades old. An unreal philosophy has crept into the minds of health administrators and doctors who are not in direct contact with the subject that these diseases are dying or will soon disappear and hence no longer constitute a danger to society or a challenge to medicine. The venereologist is dead, long live penicillin, the uncritical optimist says. Moore (1956) compares the venereologist with 'the fighter pilot whose aircraft has been shot from under him and who is parachuting slowly down to earth wondering what he will do when he lands. By a curious dichotomy he has been in the duel position of defender and attacker of his own aircraft and that he has shot himself down.' But are venereal diseases dying even in the advanced countries of the West ? Voices are being heard on both sides of the Atlantic, that in spite of the steep downward trend in the reported incidence of these diseases, particularly syphilis, there has been no evidence of complete control or near prospect of eradication (Beerman, 1958). On the other hand, these tough and enduring enemies of mankind have been rearing their ugly heads in many urban areas of the United States of America since 1955, while in Great Britain it has been reported that with the exception of syphilis, the other venereal diseases seem to be increasing and in regard to even syphilis there has been an appreciable rise in certain urban and industrial areas which they seem to attribute to the arival of large numbers of coloured immigrants from Africa and West Indies (King, 1958). There has been a sharp divergence of view between American and British venereologists on the future of venereology as a live speciality. The American view led by Moore, and based upon their impressive and outstanding achievements in the field of venereal diseases control stems from their excessive concentration on the problem of syphilis while the British with their innate conservations take a long range and broader view of the problem, are legitimately proud of the fact that the comprehensive speciality of venereology was largely a British institution, and hardly existed in other countries where it was usually partitioned between dermatologists, urologists and gynecologists. It is also good to remember that at no time in the history of medicine

was a communicable disease such as syphilis or gonorrhoea which is dependent on human sexual behaviour and whose aetiological agents have no natural extra-human biological existence ever eradicated completely. While the advanced countries of the West have achieved a measurable decline in the reported incidence of venereal diseases through educational, epidemiological and therapeutic measures of control and are only debating about the status and the future of the venereologist it is apparent that complete control of venereal diseases not to speak of eradication, is not yet in sight and the eternal vigilance is the price for keeping and maintaining a low attack rate of these diseases.

Let us take a look at the picture in our country on this health problem. We have no countrywide organised facilities for the control of venereal diseases even in urban areas and hence no base line figures of the incidence and prevalence of these disease are available. But the attendance of V. D. patients in the larger hospitals particularly of the teaching type, serological screening of specific groups of the population, such as expectant mothers, blood donors, give some idea of the venereal diseases situation with reference to syphilis. It is our estimate that 3 to 5 per cent of the urban population are positive reactors to syphilis. If hospital figures are any indication of the relative proportion of early to late and latent syphilis, it is found that 60 to 75 per cent of the syphilis load consists of primary and secondary infections which from a public health point of view, is indicative of a considerable number of undiscovered infections in the population (Rajam, 1955). There is a significant quantum of late symptomatic syphilis in the form of benign tertiary syphilis, ocular syphilis, cardiovascular syphilis and central nervous system syphilis. In the state-sponsored enquiry on ocular syphilis, a routine serological examination of patients with eye trouble showed 15 per cent positive reactors to syphilis. Of these, one fifth showed involvement of the optic nerve and half of them were cases of optic atrophy due to syphilis. One fifth of the younger age groups with a positive serology have been suffering from interstitial keratitis. In an I. C. M. R.-sponsered enquiry about the role of syphilis in mental disorders which we got going since May of this year, 14 proved cases of dementia paralytica and 1 case of psychosis due to meningovascular syphilis were uncovered in the routine unselected screening of 278 patients who sought admission in the Mental Hospital at Madras. The oft quoted and repeated opinion that general paresis of the in sane is very rare in the tropics is not borne out even from this limited enquiry.

Regarding the incidence of gonorrhoea, it is anybody's guess. The hospital figures are quite fallacious and lower than those for syphilis. As it is an infection so quickly acquired and so rapidly cured, it is our impression that an unknown but considerable percentage of patients with the disease do not reach hospitals but seek treatment in the private sector both the qualified and unqualified variety. But the dreaded complications of gonococcal infections are things of the past and there has been a progressive fall during the past 20 years with an abrupt linear

decline in 1956 and 1957 in the incidence of those complications. The peak figure for complications was 385 patients in 1940 which has dwindled to 28 patients in 1957 as gathered from the records of the Institute at Madras.

Organised facilities for the diagnosis and treatment of venereal diseases exist only in some of the teaching hospitals. Even in these institutions, the approach is mostly clinical and therapeutic. No attempt is made at the epidemiological investigations of contacts and to bring them under treatment. As part of the health programme of the second Five Year Plan, the Central Government have put forward a very modest and rather anaemic looking scheme for the national control of these diseases, but I understand only some of the States have accepted the scheme. Three years of the second plan period have come and gone and no information is available on the progress made in the implementation of the scheme. We have yet to achieve even a partial control of these disease like the Western Nations. What with the shift of populations from the rural to urban areas, the increased tempo of industrialisation envisaged in the national plans, the mounting population increase, we should exepct a high attack rate of venereal diseases which could only be brought down to a low level of infectiousness by organised control measures. Carried away by the slogan of dying venereal diseases raised in the West, a complacent apathetic attitude seems to have invaded the minds of the professional and lay public in our country. Doctors are no longer interested on the subject of venereal diseases and do not come forward to get trained in the speciality. Even in the best of times, the practice of venereal diseases has lacked the social prestige of other specialities and now even the monetary rewards have almost disappeared. There is evidence that the practice of venereal disease because of the extreme simplicity of the therapeutics, is passing into the hands of the quacks who go about armed with a syringe and vial of penicillin, a state of affairs reminiscent of quacks and women venereologists of the 16th and 17th centuries in Europe. A species of wishful thinking seems to prevail in the minds of the medical profession in our couutry that the control and mitigation of this group of diseases will be automatic, with the easy availability and widespred use of penicillin. Why all the expensive paraphernalia of clinics, laboratories, case finding and case holding procedures ?

In the history of medicine, it has often been observed that the intellectual and scientific curiosity in any disease process diminishes or vanishes, as soon as a cure has been found. To the curious biologically minded clinician, there are still fundamental and fascinating unsolved riddles in these group of diseases. A virulent *Treponema pallidum* has never been grown on artificial media. Stemming from this, a vaccine for mass immunisation is yet to be discovered. On the clinical side, why is aortitis, sharply delimited to the thoracic aorta only ? How do sex, race, geography, climate modify the course of the disease ? An organism morphologically indistinguishable, causes yaws in the back woods of Madhya Pradesh, pinta in Mexico, endemic syphilis in the slums of Madras city, and venereal sporadic syphilis

among the adults of either sex in cities, seaports and pilgrim centres. Is there any factor other than syphilis which is responsible for the unique syndrome of tabes dorsalis or gastric crisis? Why is the female of the human species deemed to be a symptomless carrier of gonococci?

From an immunological point of view, will a prolonged low attack rate of syphilis in the population with a large number of non-immune persons actually increase the danger of future epidemics as happened in Norway during World War II? With the decreasing incidence of syphilis and increasing refinements in the serological diagnosis the clinician is confronted with the problem of biologically false positive reaction, its incidence, aetiological background and management. The recent recognition that such false reactions, if chronic and persistent in the absence of syphilis, are not mere technical errors of the laboratory but indicative of underlying serious collagen disorders, have been engaging the attention of syphilologists and internists (Moore, 1956). The treponema immobilisation test for syphilis with its various modifications, has been of signal help to the clinicians in separating the true positive sheep from the false positive goats. Certain other facts and speculative fancies have emerged in the recent past after the advent or penicillin in the therapy of syphilis and gonorrhoea. Side by side with the reduction in the over-all attack rate of syphilis in the population after the advent of penicillin, there has been an increase in reinfections and/or relapses varying from 5 to 10 per cent, both symptomatic cnd asymptomatic. For thousand of years, the trepondema has been living in a rather unfriendly symbiosis with the human host, but now with penicillin therapy there appears to be a change in the host-parasite relatio$_n$ship. The virulent invasive powers of the treponema seem to have suffered a setback as witnessed in the low incidence of asymptomatic neuraxis involvement in untreated early syphilis; a mere 2 to 4 per cent of abnormality in the CSF in contrast to the 25–40 per cent in the pre-penicillin days. The French workers (Levaditti and Vaisman, quoted by Beerman *et al*, 1953) have brought forward some unconfirmed evidence from the study of syphilis in experimental animals that penicillin may ultimately dethrone syphilis from its systemic status to one of purely local lymphatic involvement provided the organism does not develop resistance to penicillin in the succeeding years.

While early symptomatic infectious syphilis is declining in most countries the incidence of latent syphilis shows an absolute or relative upward trend. In USA, for instance, the ratio of early symptomatic to latent syphilis cases was 3 : 1 in 1947. In 1954 it was 1 : 3 (Appropriation Committee of Federal Congress, 1954). The corresponding figures for the Institute of Venereology at Madras are 4 : 1 in 1953 and 1 : 1 in 1956. A sixfold increase in the incidence of latent syphilis among the Armed Forces personnel within 8 years from 1947 to 1954 has been reported by Banerjee and Narain (1956). It is a case of syphilis going underground beneath the threshhold of clinical recognition only accidentally discovered on routine serological test. Time and further observations alone can tell. Two to three decades must

elapse before one can assess the value of penicillin in early syphilis in the prevention of late syphilis.

The rising incidence of non-gonococcal urethritis with only a moderate fall in gonococcal infection is another new phenomenon of the current antibiotic era on which the British and Continental venereologists have been laying great emphasis. The aetiology is still unknown. Attempts to incriminate a virus have not so far succeeded. Various bacterial pathogens have been isolated but their aetiological roles have not been established. Its venereal aetiology is not confirmed by controlled epidemiological investigations. Fungal and protozoal agents account for a certain percentage of cases. But the type of abacterial urethritis is stated to be a major problem in European and British practice The clinical manifestations are fairly easily recognised in the male but not in the female. The syndrome of Reiter's disease, comprising chronic prostatis, relapsing urethritis, recurrent conjunctivitis and iritis with occasional occurrence of cutaneous lesions are stated to arise from an initial abacterial urethritis, either active or asymptomatic. Antibiotics produce temporary improvemet but no permanent cure. A considerable literature has sprung up in recent years; the relation between the socalled non-specific infection and the various manifestations of Reiters syndrome merits intensive investigation (King, 1958).

There is some evidence that with the decline of syphilis and gonorrhoea virus infections such as herpes progenitalis (Rajam *et al*, 1957) and protozoal infections such as trichomoniasis are increasingly recognised in VD clinics and the question of their venereal aeticlogy is being seriously debated and investigated.

It is also being incresingly recognised that antibiotic and chemotherapeutic control of bacterial and treponemal diseases with a tendency to their indiscriminate use of creating an imbalance in the competitive life of the pathogenic and saprophytic microorganisms in the human tissues, with the result that viruses at one end of the biological scale and the fungi at the other end released from the competitive coexistence of the larger bacseria may assume new and dangerous phathogenic roles afflicting human populations. A change in the pattern of old diseases and the appearance of new diseases syndromes have been a feature in the current antibiotic era. Bacterial reslstance and bacterial dependence are looming ahead to confound the physician and the microbiologist.

So far there has been no evidence of development of treponemal resistance to penicillin. But the British workers have recently brought forward evidence of a decreasing *in vitro* sensitivity of the gonococcus to penicillin and a significant increase in the number of penicillin-resistant neisserian infections. At the Institute of Venereology, Madras, we have not encountered any such resistant cases of gonococcal urethritis so far and it is proposed to conduct an enquiry on the *in vitro* sensitivity of the strains of gonococci isolated from our cases.

The common pathogen, staphylococcus, was extremely susceptible to penicillin in the earlier years of the advent of the antibiotic. But now it would appear from an increasing volume of reports appearing in foreign journals, that the organism has developed great resistance to the drug, particularly strains isolated from hospitals and are showing resistance to the other antibiotics as well. In the laboratory of the Institute of Venereology 8 resistant strains of *Staphylococcus aureus* have been isolated from patient's who were treated for syphilis and in the course of treatment or following it, developed osteomyelitis, severe phlegmonous type of pharyngitis and enteritis, from all of which a pure strain of penicillin-resistant staphylococcus was isolated. Staphylococcus has been rightly dubbed as the modern hospital plague.

The last but by no means the least of the reactions to penicillin therapy are the sensitivity reactions. Among the antibiotics, penicillin has become the most potent sensitiser because of the larger number of persons who have been exposed to it. The pattern of sensitisation has been changing during the past 15 years from evanescent urticaria and serum sickness type of reaction to the most dangerous unpredictable type of anaphylactic shock, which may end fatally in 10 to 15 minutes. Those countries where penicillin has been in widespread use and for the longest period have recorded the highest number of serious and fatal reactions. As one interested in the subject, I prepared a questionnaire and sent it to I. C. M. R. with a request that it may be circularised to the teaching hospitals and the medical administrators of our country with a view to collect data on the incidence of these reactions. I am sorry to say that I have not heard anything about the subject. It is being reported from the West, that even the air they breathe in hospitals and the milk they drink from penicillin-fed cows, havh become potent sensitisers.

From what I have tried to convey to you in this discursive lecture, you may concede that these social diseases are certainly not dying in our country. They are as much of a medical and public health problem as tuberculosis or leprosy. They lack publicity as to their importance to the health of our people. We have yet to tackle the problem in the manner of other advanced countries in the West. Even the very modest scheme of the 2nd plan period has been meeting heavy weather. Our I. P.'s., V. I. P.'s., who go about the country presiding and inaugurating medical and health conferences and exhibitions, rarely commit the mistake of mentioning venereal diseases as a health problem. Others take the cue from them. The interest, whether professional or academic among the new entrants to the profession of medicine has reached an all time low to use the expressive American phraseology, while the practice is passing on to the lesser breeds outside the profession. As a fully fledged speciality, I am afraid it is dying or dead even before it is fully born in our country. There are very few venereologists of standing in our country inspite of the growing number of medical colleges. Even for them the attractiveness of the speeiality has gone. Some of them have managed to leave while the going is good like rodents from a sinking ship, others have

become dermato-venereologists, a few have taken to sexology to keep the pot boiling believing in the dictum that the practice of prostatic massage fills the breach between sex hygiene and social hygiene. The centre at Johns Hopkins has taken to the study of chronic diseases stemming from their observation on the biologically false reaction. I understand that in the newer medical colleges and teaching hospitals, a prudent step has been taken to set up dermatology and venereology as a combined discipline as existing in the Continental countries of Europe and America. It is hoped, it will attract doctors of substance and quality to make the combined speciality their life's career.

There is so much talk of preventive and social medicine. Chairs have been established in many of the medical colleges. To the professor of preventive and social medicine, the subject of venereal diseases will ofler unlimited opportnnities for the inculcation of the principles and practice to the undergraduates and post-graduates. The venereal diseases specialist may become an extinct species. In the vacuum created, the dermatologist, the physician and the public health worker have to step in and assume responsibility for the cure and control of these diseases. To the private physician, I would say this—avoid promiscuous therapeutics. The practice of treatment before diagnosis is unpardonable in a scientifically educated physician. The adequacy of medical care should not be conditioned by the patient's capacity to pay.

To the undergraduates, I would repeat the saying of that great scholar physician Oslar, 'knowledge ye syphilis and all things clinical will be added unto you.' To the microbiologist—by all means hunt for the viruses to keep up with the Joneses, but remember the sinister spirochaete. You may still achieve a Nobie prize, for the successful cultivation of a virulent treponema pallidum and a vaccine for the mass immunisation against this ancient scourge of Homo sapiens.

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