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ORIGINAL ARTICLE

Syphilis and Infancy

A RESUME

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In the first of the series of the Elizabeth Mathai Endowment Fund lectures delivered under the auspices of the University of Madras, first generation syphilis. in which the female sex partner was found to be involved concurrently both in the physiological event of pregnancy and the pathological episode of syphilis, was touched under the caption 'Syphilis and Pregnancy'. Trasplacental spread of syphilis from the untreated pregnant woman to the fertilised ovum in her womb was described and the remark was made with relevant supportive data of the pathologists, "How strange it is that the treponema pallidum invades the developing human zygote of 16 weeks or older but none younger than this fixed foetal age !".

Much emphasis next was laid on the disastrous outcome of pregnancy when syphilitic pregnant women were left untreated for syphilis for either want of facilitis or through sheer complacence and/or ignorance. The relative merits of the outcome of treatment of syphilis in pregnant women compared with what obtains in a control group of pregnancies in non-syphilitic healthy women were pointed out at the same time.

While on this subject, a reference was also made to a particular such study in U.S.A. to pinpoint the following:—

A. That among the untreated syphilitic pregnant women, births of live, non-syphilitic infants approximated to 18% only; while (a) *foetal deaths,* (b) *prematurities* or (c) *the number of live born that scarcely survived the rigors of early life and died in the neo-natal period,* besides (d) *a proportionately* large crop of unfortunate infants that developed manifest syphilitic lesions subsequently, at various age periods, comprised the remaining 82%.

B. That on the contrary, if the pregnant syphilitic women were given the appropriate timely and adequate treatment the outcome of pregnancies very nearly equalled, if not even excelled, the happy results obtainable in the control group *vide* Chart. 1.

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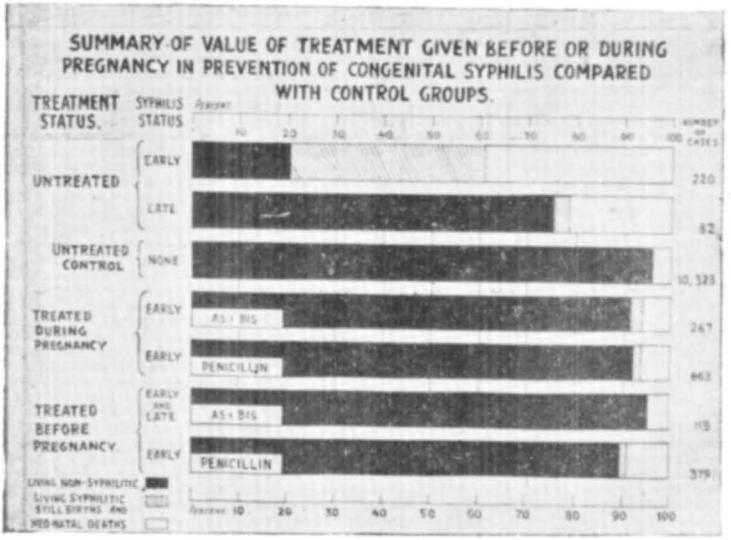
CHART 1



Thus much importance was focussed on the preventive aspect of syphilis in women prior to or during the period of pregnancy to avert the high foetal mortality and morbidity in the large segment of unborn innocent offspring.

Looking out elsewhere into the related affairs of another foreign country in the world it was expressed that the truism, "No syphilitic mother, no syphilitic baby", must have been the keynote to the Scandinavian success in the eradication of prenatal syphilis there. Dr. Weleander will be long remembered for the monumental homes in Scandinavia named in his honour and specifically erected for the reception examination and all round management of the syphilitic live born offspring. The speaker recalled his visit to a Weleander Home in 1952. While he was then most anxious to study the methods of management of concenital syphilitic babies there, he was most agreeably disappointed to find none such as this medical commodity had by then ceased to exist in that country. He had learnt also that the birth of a congenital syphilitic baby is considered an unholy reflection on the activities of the Public Health Service. Certainly it must therefore be a matter for great pride to the people of that country that first generation syphilis in women has been so successfully controlled through the enlightenment of the common man and the application of stringent public health measures inclusive of propaganda and prophylaxis. In short, it was reiterated that syphilis in infancy or congenital syphilis or in the present context, second generation syphilis had become extinct in Scandinavia.

Whilst this was so elsewhere, the pertinent question posed was, "What is the situation in Madras?". In answer to this, a reference was

made, once again, to the figures furnished by the Pathologist of the Madras Corporation and the Superintendent of the Government Hospital for Women and Children, Egmore, Madras - *vide* Statistics, Chart 2.

CHART 2

Number of syphilitic children from syphilitic mothers calculated for a five year period

Clinics	Total No. of Females	Mothers with positive reaction	Living syphilitic infants	Still Births	Miscarriages
Corporation Antenatal Clinics	66533	3792	1550	690	257
Government Hospital for Women and Children, Madras	51695	4301	1760	782	292
Total	118228	8093	3310	1472	549

It will be gleaned from the data that in between these several institutions, there were discovered through serologic screening of 118,228 ante-natal cases over a period of 5 years, beginning 1953 and ending 1957, 8093 sero positive reactors amongst the parturient clientele.

Stemming from this factual statement is the necessary corollary, "What would have been the outcome of pregnancies among the 8093 parturient positive reactors?". At best the answer may be ivided into two parts :

Firstly, conceding all the positive reactors among the pregnant women to be early luetics and that every positive sero-reactor in pregnancy had been given appropriate anti-syphilitic treatment, the results would equal, if not even excel those good results accruing in the non-syphilitic control group as per the representation in Chart I. But the chances are that most of these parturient and positive sero reactors could not have had the standard treatment; in which case the second possibility, calculated as per outcome of the control group of *untreated syphilis in pregnancy,* may be conjectured in terms of a bumper crop of foetal deaths, prematurities and births of living syphilitic infants; mathematically calculated, the Statistician presented the appalling figures: a composite total of 2000 for foetal deaths and prematurities and 3310 living syphilitic infants.

Discussing foetal deaths, the Expert Committee of Health Statistics of W.H.O. pointed out that 'a foetal death shall be defined as death of a foetus prior to complete expulsion or extraction from its mother, irrespective of the duration of pregnancy and the death is indicated by the fact that after such a separation, the foetus does not breathe or show any other evidence of life such as the beating of the heart, pulsation of umbilical cord or twitching or movement of the voluntary muscles'.

Foetal deaths, according to same authorities, may be classified under three groups:

First Group.—Less than 20 complete weeks of gestation.

Second Group—Between 20 and 28 weeks, and

Third Group.—28 weeks or more.

The adoption of the term "foetal death" referred to here is likely to be more useful of application and universal usage, since the other familiar equivalents such as 'abortion' and 'miscarriage' mean differently for different people.

To what an extent is syphilis responsible for foetal deaths? The pertinent available information is recorded hereunder: (1) Autopsied 164 dead born; of them 3% were due to syphilis (Ratnavathy and Reddy), (2) Arey and Dent have reported on autopsy findings over infants dying in the neo-natal period and they recorded that among 137 dead, congenital syphilis was discovered in 9, yielding a percentage of 6, (3) Gault and Jayaraj of Vellore reported on an autopsy done on a female baby that took only one breath and died. The body weighed 1500 grammes and presented a swollen abdomen. Among other details mentioned it is noted with interest that numerous spirochaetes were seen in sections of intestines, liver, spleen and pancreas and the liver sections revealed the presence of fibrous tissue in the region of the portal tract *and in between the liver cells.* There is thus available sufficient proof that syphilis also plays an etiological role in the causation of foetal deaths.

What constitutes prematurity? The definition of this term also requires elucidation. As noted in the Manual of International Statistical Calculation on Diseases, Injuries and Causes of Death, a premature infant is a live born infant with a birth weight of 5-1/2 lbs. or 2500 gms. or less. In certain countries, the weight is not specified. A live born infant of less than 37 weeks of gestation is premature.

What is the significance of prematurity? Premature births are more common amongst untreated syphilitic pregnant women than amongst non-syphilitic women. It is about 11 times the figure for non-syphilitic group and Cruickshank has pointed out that syphilis is an important cause of premature delivery and prematurely born infants are much sooner carried away by bronchopneumonia, asphyxia or atelectasis. There were prematurities recorded in the annual report of the Health Officer of Corporation of Madras for every year.

The significant role of preventable syphilis in the production of foetal deaths aid prematurities having been explained, it may be seen what an enormous responsibility of national importance has fallen on the Obstetrician to discover the positive sero reactors among the ante-natal clientele and to put a full stop with requisite theraphy to the large toll of mortality and morbidity that otherwise will overtake the innocent unborn in our area.

The subject of live born syphilitics was next taken up for consideration with particular reference to the period of infancy. It may be observed

here at the outset how embarrassing it is that the term infant is difficult of comprehension, *e.g.* (i) a reference to Oxford Dictionary reveals that according to law a person under the age of 21 years is an infant! (ii) Another definition is, "an infant is the offspring, male or female of human parents from the earliest period of life upto 7 years of age". (iii) The medical dictionary indicates that the word infant is derived from Latin, infans, meaning speech and refers to the period of life upto 2 years. From this medley we may reasonably choose for our study the difinition that an infant is a human being from the moment of expulsion from the maternal body upto 2 years of age.

For convenience and lest the speaker should trespass into the boundless subject of adult or acquired syphilis, care is taken to largely restrict the subject under review to Syphilis in Infancy.

It may be recalled that syphilis in infancy when contracted before birth is known severally as congenital syphilis, hereditary syphilis or pre-natal syphilis; or may also be spoken of as second generation syphilis; and is an excellent example of "neglected syphilis", since out of negligence of first generation syphilis arises second generation syphilis.

The figures for "Congenital syphilis" in the statistical reports of the Institute of Venereology stand at 3% for the period of 10 years from 1948 to 1957 - *vide* Chart 3.

CHART 3

Years	Total Syphilis	No. of Congenital Syphilis	Males	Females	Percentage
1957	2353	49	21	28	2.90
1956	2636	72	30	42	3.03
1955	3537	91	34	57	2.80
1954	5326	116	72	44	2.10
1953	5642	114	55	59	2.50
1952	6867	129	63	66	2.40
1951	5806	126	56	70	3.03
1950	4772	124	57	67	3.10
1949	4973	133	53	80	3.50
1948	4888	76	33	43	3.70
		1030	474 46.02%	556 53.98%	

1030 cases of congenital syphilis were reviewed. Interesting high lights of the breakdown with comments are :

(*i*) The sex-war proportion is 474 males and 556 females or 46.02% and 53.98% respectively.

(*ii*) In the midst of the obstetric disasters overtaking syphilitic pregnant women, it is curious observation that Nature manages to send a relatively larger proportion of female congenital syphilitics alive into the world. The numerical preponderance of female syphilitic infants over

male syphilitic ones is obvious. An infant brought for demonstration of congenital syphilis was also a female.

(*iii*) The study of the records over the 10 year period (*vide* Chart 4) from the standpoint of the rank of the infected babies born, reveals that the percentages of congenital syphilitics belonging to the first, second, third and fourth para went down in the descending order, proportionately, finally dwindling down to insignificant figures, confirming the belief that congenital syphilis is more common among the first few pregnancies in a woman's obstetric career in our study.

CHART 4

Rank of the congenital syphilitic infant

Year	Total No. of Cases	1st Para	2nd Para	3rd Para	4th Para	5th Para	6th Para	7th Para	8th Para	9th Para	10th and above	Unknown
1957	49	6	10	4	6	3	4	4	1	—	—	11
1956	72	11	6	6	4	6	2	3	1	1	—	32
1955	91	7	7	10	6	6	5	1	3	2	—	44
1954	116	20	20	11	18	4	4	3	2	—	1	33
1953	114	10	22	15	19	5	5	2	2	1	1	32
1952	129	21	30	19	15	15	10	1	1	—	1	16
1951	126	32	12	21	12	12	6	4	2	2	2	21
1950	124	16	26	28	11	10	10	2	2	2	—	17
1949	133	21	29	16	14	10	8	3	2	5	1	24
1948	76	14	18	15	6	3	7	2	1	—	—	10
Total	1030	158 16%	180 17%	145 14%	111 11%	74 7%	61 6%	25 2%	17 2%	13 1%	6 1%	240 1%

(*iv*) With reference to the age of the infant at the time of its first exodus from the composite province of the obstetrician and the pediatrician to the Institute of Venereology, it will be seen that the large majority of infants happened to be within the first 6 months of age *vide* Chart 5. This

CHART 5

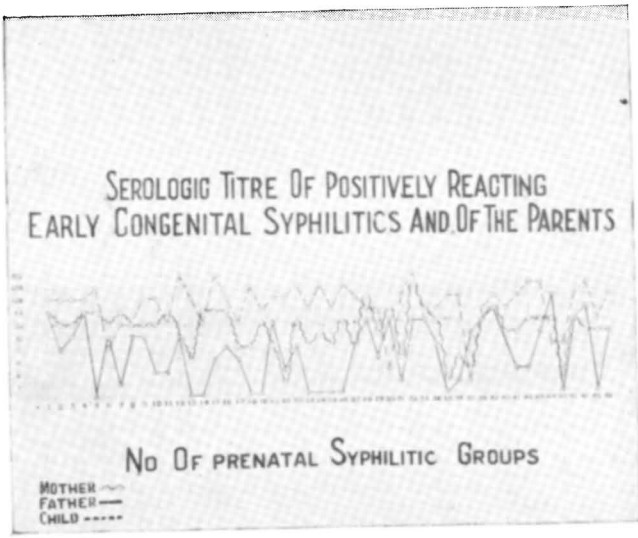
The age period when the congenital syphilitic infant was brought for treatment.

Year	Total No. of Cases	At Birth	3 mths.	6 mths.	9 mths.	1 year	1½ years	2 years	3 years	4 years	5 yrs. and above	Unknown
1957	49	5	17	11	1	2	4	2	1	1	5	—
1956	72	13	27	13	6	3	2	—	—	—	8	—
1955	91	6	25	14	6	8	3	—	—	4	18	5
1954	116	9	21	19	16	12	6	1	3	—	26	3
1953	114	4	36	23	13	9	2	2	—	3	18	4
1952	129	19	43	32	7	4	3	—	2	—	16	3
1951	126	8	49	28	9	8	5	4	2	—	9	4
1950	124	13	39	26	10	10	9	2	—	—	10	5
1949	133	8	50	24	19	16	1	—	1	—	11	3
1948	76	5	27	17	13	7	4	2	—	—	1	—
Total	1030	90 9%	354 32%	207 20%	102 10%	79 7%	39 4%	13 1%	9 1%	8 1%	122 12%	27 3%

aspect of the presentation of the neonates in the earliest period of life in large numbers has to be borne in mind in the calculation of failure rate, for it will be seen that in spite of the best of treatment afforded to them during this age period, many of the treated patients succumbed: whether this be due to the overwhelming luetic infection itself or because of unmanageable concurrent other infections or treatment reactions it is difficult to decide. Observers in other lands have recorded similar disappointing outcome of the management of neglected syphilitic cases during the first 6 months of the age period of infants.

(*v*) The serology of the congenital syphilitic infant was invariably higher in dils. than that of the mother while the father's was low or nil reactive, *vide* Chart 6.

CHART 6



(*vi*) At this juncture, it may be mentioned that the syphilitic new born may arrive into the world with no obvious external manifestation and the apparently normal prenatal syphilitic infant may exhibit signs of syphilis within a few weeks after birth. The manifest lesions of early prenatal syphilis confined to the first 2 years of age of the prenatal syphilitic may be cutaneous, skeletal, muco-cutaneous and or visceral. Chancres are conspicuous by their absence. Special organs and the central nervous system among the systems may show outward evidence of involvement. The cardiovascular system maintains strict neutrality.

(*vii*) According to our statistics - for the period 1948-57 *vide* Chart 7, amongst the 1030 cases, the number of patients with skin lesions heading the list was 733. Next in order was the skeletal group standing at 467. Third in rank was the group of muco-cutaneous lesions putting up 277. Visceral involvement was observed in 133. Central nervous system was involved only in 6 cases of whom were 3 patients - 2 months, 3 months and

5 months old (Ref. VDOP 119/50 female, VDOP 92/50 female) VDOP 655/50 female) respectively. All these were blood sero-positive reactors who exhibited an increased cell count and a positive sero reactivity in the spinal fluid. Jeans and Cooke hav eput up figures ranging from 30% to 40% as showing spinal fluid abnormalities in their series of congenital syphilitics.

CHART 7

Frequency of manifestations in prenatal syphilitic children who attended the V.D. Department of the Government General Hospital during the 10 years—1948 to 1957

Manifestations	Frequency
1. Skin lesions	-- 733 times
2. Skeletal lesions	-- 467 „
3. Mucous membrane lesions	-- 277 „
4. Visceral involvement	-- 133 „
5. Interstitial keratitis	-- 37 „
6. Spinal Fluid—Positive	-- 6 „

*C. S. F. Positive Cards: 1. 1970/56
2. 10394/54
3. 8069/54
4. 92/50
5. 119/50
6. 655/50

(viii) Another category of prenatal syphilitic infants is the latent congenital syphilitic group. There were no figures for this entry. In the study of this group after eliminatnig technical false positive sero reactions and biological false postive sero reactions, care must be taken to weed out those cass with a passive transfer of syphilitic reagin as exemplified in the following case : a woman patient attended with pregnancy and a positive serology of 128 dilutions. A full course of anti-syphilitic treatment was given. Subsequently she was under surveillance till and after her confinement. She brought forth a female child after full term. A review examination of the mother and the child revealed no evidence of clinical syphilis. The mother's serology remained about the same. The infant's blood was reported positive in 8 dilutions. No treatment was given because of the presumption that the positive serology in the infant could be due to the circulation of passively transferred maternal syphilitic reagin in the infant's blood stream. It turned out on further follow-up examinations that there was no clinical evidence of syphilis or a rise in the serologic titre of the infant, but that a decline in the serology had been registered. Here the infant was not syphilitic and the question of latent spyhilis or the necessity for anti-syphilitic treatment did not arise.

(ix) True latency in adult acquired syphilis is indicated by a persistent positive sero-reactivity or a rise in titre in the absence of any active clinical manifestations on the surface of the body, in the special organs, the cardiovascular system or the central nervous system, con-

Fig. 1

The Story of the Mother and her Baby to bring out the Passive Transfer of the Maternal Reagin Across the Placenta into the Infant's Blood Stream

The picture presents the figure of a woman who came to us singly, but now carrying the baby, once in her womb. She was found to be frank syphilitic with the dangerous potentiality of infecting her unborn offspring with the syphilitic organisms. She had a previous history of disastrous obstetric record. Her blood was reactive in high dilutions. There was not an easy method of determining if the foetus was already infected. However on the presumption that the chances of transplacental syphilitic infection are always present beyond the 16th week of intrauterine life, the woman's condition was taken for an emergency and was given the routine course of anti-syphilitic treatment with P.A.M. 2 c.c. or 6 lakh units I.M. daily for 10 days. As will be referred to in the subsequent presentation, the pregnant woman delivered at Full Term, an apparently normal non-syphilitic live baby. Examination of both the parent and the baby reecntly, yielded the only positive finding, in either of them, of a reactive serology. What is the significance of the positive serology in the infant? Does it connote syphilis? There could be any one of the possibilities regarding the positive serology.

(a) Technical false positive reaction.

(b) Biologic false positive reaction.

(c) True positive reaction.

(d) Treated residual reaction.

(e) Passive transfer of the reagin.

By a careful sift study it was resolved that the positive reactivity of the child belonged to the last category—passive transfer of the reagin. The baby was not treated, but was re-examined after an interval of a few months. The serologic titre declined almost to negativity and the infant was declared non-syphilitic.

Fig. 2

The mother in the picture was first seen at the Institute in a state of pregnancy, when clinically she was suffering from an ano-proctitis with stricture of lymphogranulomatous origin. Her blood serology was reactive by the VDRL slide test in 1 dil. She was pregnant for the third time with a background of bad obstetrical antecedents in the past. Her husband (1387/57) on confrontation was clinically and serologically negative. Syphilis was not considered in the patient. She was treated with sulphonamides for the viral infection. She disappeared from our purview at the time of labour and reappeared later with an infant in her arms, who presented a high titred positive serology and typical roentgen lesions in the tubular bones. Both the mother and the child were treated with anti-syphilitic remedies.

Later, after a lapse of time the same woman appeared with one more baby in arms beside the first and another in her womb. She is still reactive by the VDRL slide test in one dilution. What is the destiny of the foetus? Does the mother require anti-syphilitic treatment as prophylaxis to protect the developing foetus?

As the confinement, immdiately preceding the latest pregnancy, resulted in a normal baby seen in the picture as the younger sibling with no clinical, serological or radiological sign or stigma the mother is not given any anti-syphilitic treatment. It remains to be seen what the outcome of the latest pregnancy will be. The low titred positive serology in the mother is indeed a riddle.

firmed by negative roentgenograms of the cardio-aortic apparatus and negative cerebro spinal fluid studies. This is equally true of congenial syphilis. There might however be stigmata of congenital syphilis associated with a positive serology. Such cases are not rare in our experience.

In order to depict the various overt clinical manifestations referred to, photographs corresponding to various lesions were projected on the screen. A few of them are particularised for discussion hereunder :

(a) Under the category of skin lesions a special reference was made to bullae occurring in the palms and soles of a congenital syphilitic, teeming with treponema pallida on darkfield illumination examination. Bullous syphilides are not however common in adult syphilis.

(b) Describing muco-cutaneous lesions, the picture of an infant's eyes, was referred to. The welling pus from the conjunctival sac was found to show treponema pallida. Ordinarily it might have been expected that the ocular discharge was gonococcal in nature. In this instance both gonococci and treponema pallida were found.

(c) i. Referring to slides demonstrating skeletal lesions it was emphasized that the ends of tubular bones were a favourite resort of the treponema pallida because of the marked vascularity, slow circulation and low temperature, obtaining in the metaphyses where the diaphyses end and the epiphyses begin. The cartilage of conjugation when affected manifests signs of chondro-epiphysitis. Diaphysitis and periostitis also occur. It was mentioned that in the course of travels abroad by the speaker, no opportunity was available to study congenital syphilitic skeletal lesions either in the U.K. or in the U.S.A., but at the Hospital for the Sick Children in Great Ormonde Street, London, autopsy notes were available; and the collection of bones on congenital syphilis, a precious contribution of Jules Parrot, were studied. Of the categories of the bone lesions in congenital syphilis it was pointed out that chondro-epiphysitis was the commonest on clinical examination confirmed by the skiagraphic proof of metaphysitis in the corresponding zone.

ii. Generalised periostitis and osteomyelitis also occur. But localised bilateral osteomyelitis in the region of the medical and upper end of either tibia was pathognomonic of congenital syphilis. While on this subject, a reference in passing, was made to the etiologic diagnosis of macerated foetuses. It is known that syphilis and Rh incompatibility, both produce macerated foetuses. When in a diagnostic predicament and the etiological issues has to be decided between congenital syphilis and Rh incompatibility, the decisive factor is the skiagraphic demonstration of the bilateral 'cat bite lesion' of the medical and upper end of either tibia named after "Wimberger".

iii. Under reference to skeletal lesions in congenital syphilis again, a skiagram was shown exhibiting dactylitis. In syphilis of the patient under study the proximal phalanx was involved resulting in the contraction of the finger in contrast to skeletal tuberculosis in another infant in whom the terminal phalanx was affected, terminating in sinuses.

iv. Commenting on the "hot cross-bun skull" with cranio tabes and Parrot nodes, once upon a time attributed to syphilis, it was pointed out that the consenus now is that the thinning of flat bones of the cranium and sponginess of the frontal and pariatal bones with prominence are largely due to nutritional deficiencies causing a metabolic derangement. This was mentioned to alert the practitioners on the change of views regarding cranial bone lesions in prenatal syphilitics.

v. To complete the story of bone lesions in Congenital Syphilis, sabering of the tibiae and prominence of the inner end of a clavicle - Higoumenakie sign - in a tardive congenital syphilitic were demonstrated as also the contracture of the little finger in a patient - the *Dubois'* sign.

(x) Discussing visceral involvement in congenital syphilis, a reference was made to text books, wherein splenomegaly is mentioned as a common occurrence. In the experience of the speaker, contrarywise, hepatomegaly is more frequent in our cases with an occasional splenomegaly occuring concurrently. As far as hepatomegaly is concerned, such patients were occasionally brought to the Institute presenting exclusively a protuberant abdomen and concurrent overt jaundice Impression smears of liver biopsy specimens obtained from living congenital syphilitic patients revealed treponema pallida on dark-field illumination examination. This demonstration of t.p. in biopsied liver specimens of congenital syphilitics at the Institute is claimed to be the first presentation of the kind to be recorded in literature. In a limited histopathological study of the liver biopsies of living infants with congenital syphilis, no pericellular fibrosis but degeneration of liver cells and evidence of chronic inflammation around the portal tracts were noted. unlike what was presented by Gault and Jayaraj in their autopsy case report.

(xi) Reference to congenital syphilis with renal or other visceral involvement did not appear in the studies undertaken. Comments on the dystrophy of hair, nails and other cutaneous appendages are omitted for brevity.

Observations were made in passing, on signs of tardive congenital syphilis occurring at an age period beyond the first two year period of life, *i.e.*, congenital syphilis when irremediable damage due to irreversible pathologis conditions are confronted wiith. Interstitial keratitis, Hutchinson's incisors, Moon's mulberry molars, bilateral nerve deafness, Clutton's joints, sabre tibiae, flattened bridge of nose with destruction of the nasal bones and septa, tabes juveniles, paresis juveniles and idiocy were touched on simply to emphasize the importance of preventive medicine through timely tackling of early congenital syphilis.

DIAGNOSIS AND MANAGEMENT OF SYPHILIS IN INFANCY

It was pointed out that in the experience of the speaker the diagnosis of congenital syphilis rested chiefly on *(i)* the relevant personal anamnesis and the obstetric history given by the female parent, *(ii)* to a certain extent on the results of interview through confrontation of the male parent and *(iii)* on the ensemble of the clinical, bacteriological, serologi-

Fig. 3

The Picture of a family high lighting the modes of syphilitic infection :

(a) The sexual highway leading to the infection of the central figure namely, the mother of the family who is infected but yet who does not present any manifest lesions on the surface of her body. The husband responsible for her infection is the 5th columnist and as such is cut of the picture. Untreated syphilis in the mother was ultimately responsible for syphilis in her youngest offspring.

(b) The transplacental highway in syphilis via which the luetic infection of the once foetus, has now resulted in manifest syphilis in the live born innocent baby in arms.

(c) The non-sexual highway of syphilis has culminated in the occurrence of extra-genital chancres in the elder siblings standing on either side of the mother with (i) a chancre on the thigh, (ii) a chancre on the abdominal wall.

cal, roentgenological and occasionally the spinal fluid pattern and histopathological data obtained of the suspected infant or child.

The routine treatment prescribed is 150,000 units or ½ millilitre of PAM in oil (any brand that satisfies the W.H.O. specifications) given daily, I.M., for 20 days for the light weight infants under three months of age or 3 lac units or 1 millilitre of PAM I.M., daily for 10 days for the older ones upto 2 years. This is not all. It is increasingly realised in recent years that the case of pre-natal syphilis of less than 2 years of age requires the attention of paediatric specialists. According to Moore, it is the paediatrician who takes care of the congenital syphilitic infants and children under the age of 14. The need for expert paediatric advice is indeed great in the management of the marasmic infant who requires fluids, salts and proteins for dehydration and blood for anaemia.

OTHER ASPECTS OF TREATMENT OF SYPHILIS IN INFANCY

In the series under review congenital syphilitic infants were hospitalised along with the mother. The treatment was completed within less than a month in practically every case except when the infected babies were discharged against medical advice or had died before completion of therapy. What a contrast to prepenicillin era—the days of metallic chemotherapy when the duration of therapy extended to nearly 2 years!

PROGRESS

(a) *Clinical.*—The clinical condition in early congenital syphilis showed marked improvement at the end of therapy. The cutaneous and mucosal lesions healed promptly; no scars suggestive of rhagades were noticed in the series during the follow up period. The skeletal lesions subsided with relief from tenderness and pain. The visceral lesions showed signs of amelioration particularly in the liver series in which the size of the liver returned almost to normal limits; jaundice disappeared.

(b) *Serologic.*—The positive serologic titre reverted to negativity or declined rapidly when the treatment was started within the first few months of the luetic infection in the infant. A delay in reversal of serology was recorded in infants for whom the treatment was started after 6 months of age.

(c) *Relapses.*—Clinical replapses in the experience of the speaker happened to be 1%.

(d) *Fatalities.*—It is confessed that in the presence of an overwhelming transplacental luetic infection, in a few infants as already pointed out deaths occurred in the early series despite desperate efforts. Fatal Herxheimer reaction has been noted by Holgen. In 1946-47, 10 deaths occurred among 59 cases administered commercial penicillin G bringing the mortality rate to 16.9%. In 1953, 3 deaths occurred among 102 cases treated with PAM and in 1955-57 one death among 26 case tsreated with diamine penicillin.

Fig. 4
A marasmic infant in prenatal syphilis.

Fig. 5
The picture of an infant with cutaneous, mucous membrane and skeletal lesions in prenatal syphilis.

Fig. 6
Picture of an infant with ocular and nasal discharges teeming with treponema pallida

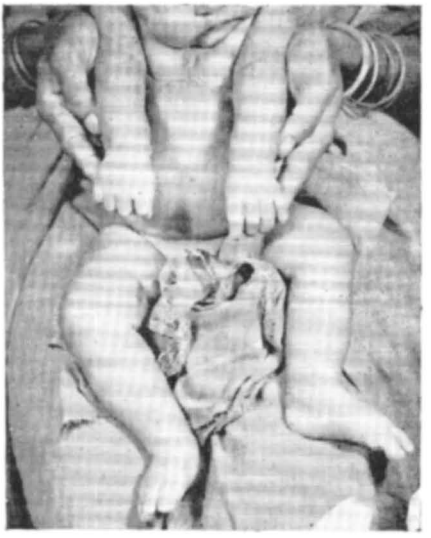


Fig. 7
Osteochondritis lower end of either forearm with pseudoparalysis.

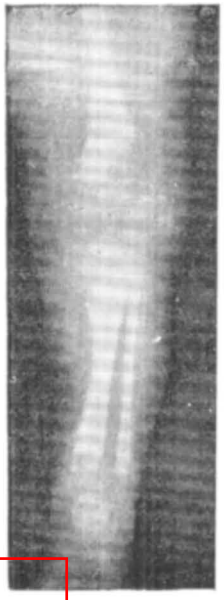


Fig. 8

kiagram of the tubular ones revealing the damge done by syphilis at various sites.

9

Skiagram of the bones of the lower limbs revealing the Wimberger sign, i.e. localised osteomyelitis producing a cat bite appearance in the upper and medial end of either tibia.

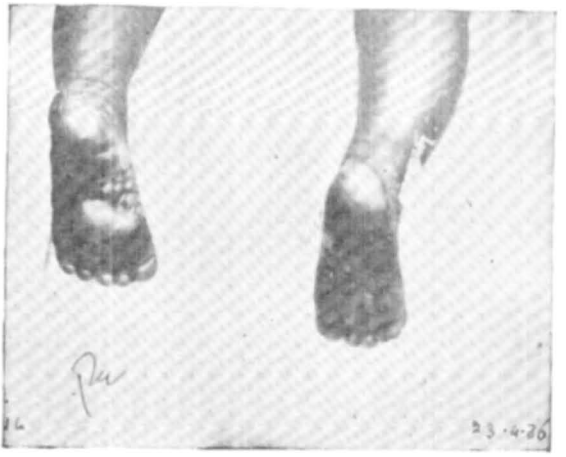


Fig. 10

Syphilitic pemphigus soles.

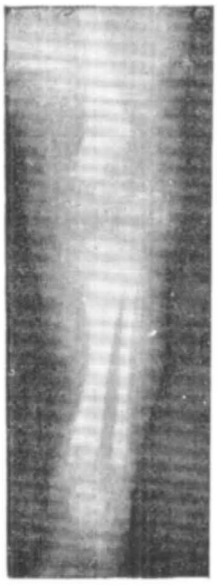


Fig. 8
Skiagram of the tubular bones revealing the damage done by syphilis at various sites.

9
Skiagram of the bones of the lower limbs revealing the Wimberger sign, i.e. localised osteomyelitis producing a cat bite appearance in the upper and medial end of either tibia.

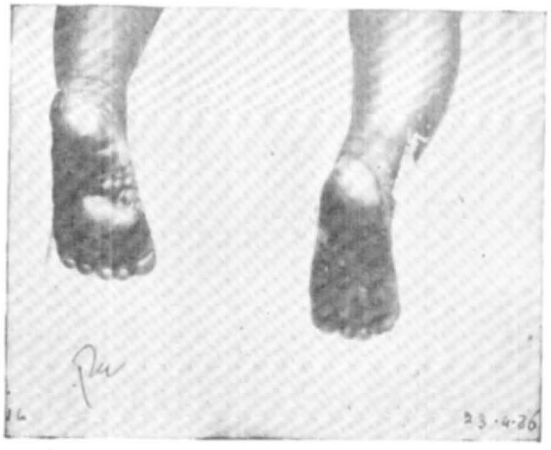


Fig. 10
Syphilitic pemphigus soles.

Fig. 11
Exfoliation soles in a congenital syphilitic.

Fig. 12
Generalised cutaneous eruption in early prenatal syphilis with better localisation on the face.

Fig. 13
The picture of a congenital syphilitic with a distended abdomen secondary to enlargement of the liver and the spleen.

Fig. 14
Bullous dermatosis—syphilitic pemphigus—the individual bullae have burnt —the bullous material revealed treponema pallida on dark-field illumanation test.

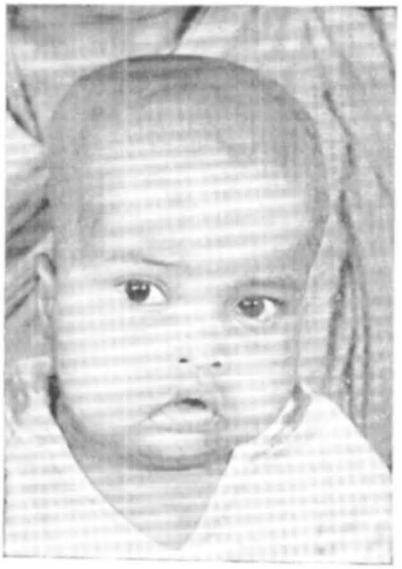


Fig. 15
Prenatal syphilitic with a prominent forehead.

Fig. 16
Palmar and plantar lesions in a prenatal syphilitic

Fig. 17
Dactylitis in a prenatal syphilitic.

Fig. 18
Prenatal syphilitic with haemorrhagic lesions nose and mouth.

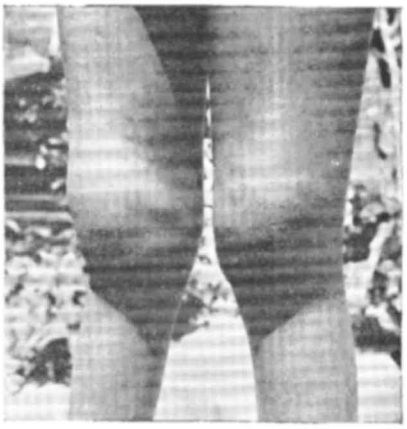


Fig. 19
Clutton's Joints—Painless symmetrical hydrarthrosis.

Fig. 20
Interstitial keratitis and Clutton's joints in a juvenile.

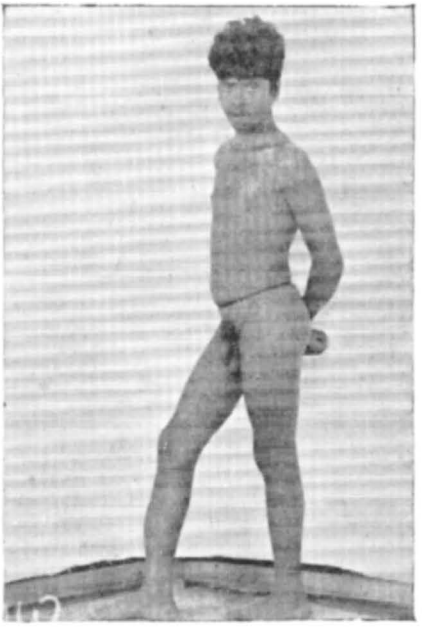


Fig. 21
Sabering of the tibia in a juvenile with prenatal syphilis (Late).

Fig. 22
The clavicular sign—the Higoumenakie's sign in prenatal syphilis.

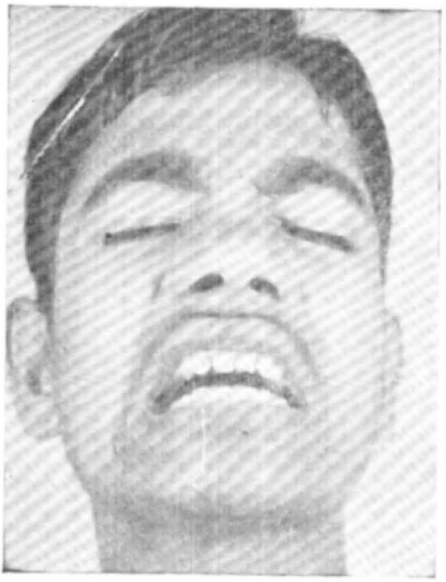


Fig. 23
Hutchinson's Incisors in juvenile tabetic.

Fig. 24
A juvenile paretic.

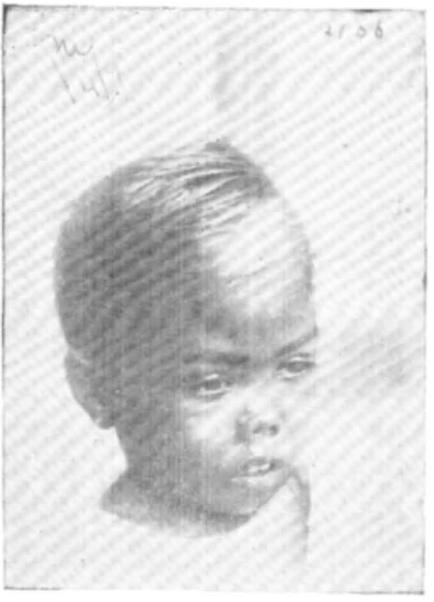


Fig. 25
Typical facies with flattened bridge of nose in prenatal syphilis.

Fig. 26
An infant with prenatal syphilis born with teeth.

Fig. 27
Imbecility in a juvenile with prenatal syphilis.

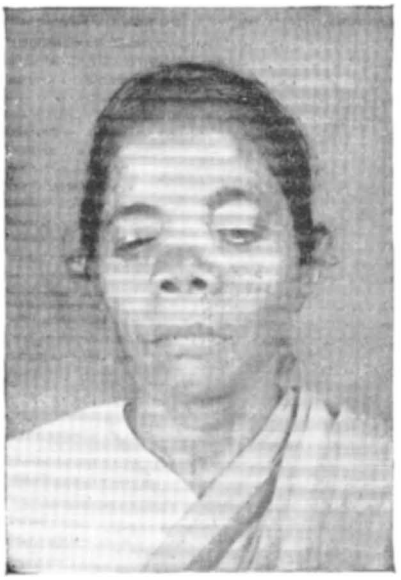


Fig. 28
The typical facies with flattened bridge of nose in prenatal syphilis.

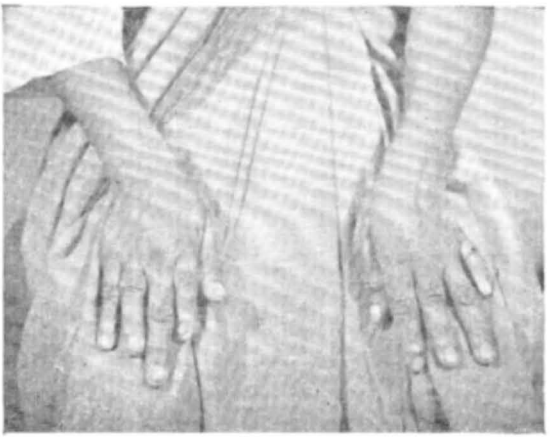


Fig. 29
Contracture of the little finger of the left hand in prenatal syphilis (Late).

Fig. 30

Acquired Syphilis in Infancy

Note the varying age periods of the lesions about the orifices and the ends of long bones.

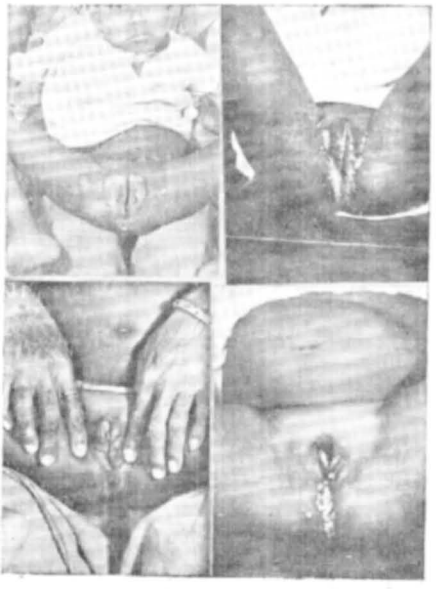


Fig. 31

Acquired Syphilis in infancy.

Nevertheless the significant lesson to be learnt from the presentation of these disappointing notes in this retrospective study is that syphilis in infancy particularly early congenital syphilis is cent per cent preventable. It is the bounden duty therefore of every one concerned to take steps to see that syphilis in infancy is prevented. To this end we must at least recognise and adequately treat every syphilitic woman partner of the first generatio in time with appropriate remedies. *This unborn innocents expect every one of us to do our duty!*

(In closing, a note of warning was issued on the possibility of mistaking acquired syphilis in infancy for congenital syphilis in infancy.

To clarify the issue of the subject of acquired syphilis in infancy—childhood, a photograph was projected presenting a woman with her congenital syphilitic baby on her lap and two older siblings, who, each one standing by the mother, had acquired an extra-genital chancre, the congenitally infected infant having donated the syphilitic infection through non-sexual contact to the two elderly girls.)

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