

A STUDY OF DONOVANOSIS (GRANULOMA VENEREUM)

At Hyderabad & Secunderabad By

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This paper deals with the incidence of Donovanosis in the twin cities of Hyderabad and Secunderabad. From Osmania General Hospital, Hyderabad material has been collected for 6 years from 1-1-1962 to 31-12-1967 and from Gandhi Hospital, Secunderabad material has been collected only for 2 years from 1-1-1966 to 31-12-1967.

The aim of this paper is primarily to evaluate the incidence of this disease in twin cities of Hyderabad and Secunderabad. This part of Andhra Pradesh is not endemic for this disease. Following state reorganisation movement of population to the state capital including people from coastal areas created the potentialities for the increased incidence of this disease. It is also hoped that this paper will further aid in creating an increased awareness of this disease in this country in general and in this area in particular. Because venereologists feel that cases of Donovanosis are either incorrectly diagnosed or labelled or missed altogether when the incidence is low and when this condition is not kept in mind.

INTRODUCTION

Donovanosis was first described by Mc-Leod at Madras in 1882, as serpigenuous ulcer. Major Charles Donovan described the intracellular, small rod shaped bodies, now known after him which are diagnostic of this condition. Since then much progress has been made and much light has been thrown on the various aspects of this disease, starting with its nomenclature till Barton et-al introduced streptomycin as the drug of choice. Thus very vast knowledge was added, comparatively, over a short period. But there are still many loop-holes in the epidemiology of this disease to this day inspite of extensive investigation.

Donovanosis is a chronic progressive, mildly contagious disease of venereal origin characterised by granulomatous ulceration of genitalia and the neighbouring sites with a strong but unsuccessful attempt to heal. Extragenital and metastatic lesions are also described.

This disease is endemic in various parts of tropical and sub-tropical countries, though there are no limitations as to climate. The disease is endemic in China, East Indies, North Australia, West and South Africa, Central-South and North America and West Indies and India. In India, this disease is endemic in Madras, coastal districts of

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Andhra Pradesh and Orissa. This disease is also described among Phari-hill dwellers of Himachal Pradesh—Reports from other parts of India are scanty.

The disease has been described most frequently among negroes but there are no limitations as to race. The disease though more frequent from 20–40 years of age, which confirms with the maximum sexual outlet during this period, but it can occur in persons below 15 years and those over 70 years.

There are many dark corners of this disease, which have to be enlightened by future work. The confusion regarding its name is now wholly cleared because all venereologists are agreed up-on the terminology. Opinion is divided regarding its origin, whether venereal or non-venereal. There are few points to support both the hypotheses.

Points for Non-Venereal origin :—

- (1) low incidence i.e., 1.1% (Madurai) to 3.3% (Guntur) even in endemic regions.
- (2) Marked difference in racial and sex distribution of the disease.
- (3) No accurate knowledge of shortest, average and maximum incubation period.
- (4) Occurrence of extragenital primary infection.
- (5) Infrequency of conjugal infection.

Points in favour of Venereal origin:—

- (1) High frequency of sexual exposure prior to the onset of disease.
- (2) In majority (90%) the primary and sole lesions over the genitalia.
- (3) Highest incidence during the sexually active life of an individual (20–40 years).
- (4) Sexual promiscuity closely related with the incidence.
- (5) When the lesions are extragenital as anal or perianal, Marvell (1958) has reported 9 out of 10 cases having homosexual behaviour practicing pederasty.
- (6) Infrequent conjugal infection is more apparent than real. In recent years there is increasing number of reports of conjugal Donovanosis (Clark, reported 11 cases Rajam and Rangiah reported 30 conjugal cases out of 250 total. Sarma in 1955 and Ramchander in 1966 have reported conjugal Donovanosis from Guntur).

Thus based on the above arguments most venereologists agree to the venereal origin.

The other controversy was over the etiological agent, which is now solved to great extent by successful induction of the disease by transplantation of infective tissue by Anderson-Greenblatt and other workers in New York.

MATERIAL & METHOD

The incidence of the disease calculated from the statistical study of cases attending Venereology departments of twin cities of Hyderabad and Secunderabad. From

Osmania General Hospital, Hyderabad statistics are available for a period of 6 years i. e. from 1-1-62 to 31-12-1967, but unfortunately from Gandhi Hospital, Secunderabad, statistics have been collected only from two years i. e. 1-1-66 to 31-12-1967. The data thus obtained was further studied according to the sex distribution, site of primary lesion, H/o exposure marital status etc. with an attempt to work out the epidimilological factors influencing the disease.

TABLE I.

*Incidence of Donovanosis at Osmania General Hospital, Hyd. (O. G. H.)
and Gandhi Hospital, Sec'bad. (G. H.)*

	<i>Osmania General Hospital</i>						<i>Gandhi Hospital</i>			
	1962	1963	1964	1965	1966	1967	Total	1966	1967	Total
Total No. of V. D. cases	3541	3160	2794	2602	2518	2597	17212	1120	1180	2300
Cases of G.V.	11	17	9	12	6	8	53	8	14	20
Incidence	0.31%	0.22%	0.32%	0.46%	0.23%	0.3%	0.3%	0.51%	1.2%	0.95%

Reported incidence from other parts of India:—

Present incidence in Hyderabad	0.3
Present incidence in Secunderabad	0.9

Reported incidence from other parts of India:—

1. Rajam-Rangiah-Madras	1932-41	1.5
2. Rama Iyyengar-Madurai	1958	1.1
3. Sarma Guntur	1955	2.85
4. Ramchander M-Kurnool	1959	1.3
5. Ramchander Guntur	1967	3.36
6. Sandarilal & N. S. Padma A. Velon Pondicherry	1966	3.53
7. Rama Rao & Patnaik-Kakinada		6.3

Thus the incidence is lowest in the literature showing there by that Donovanosis is not endemic in Hyderabad-Secunderabad. The yearly incidence too does not show any set pattern. The population movements following state reorganisation might have bearing on the epidimilology of Donovanosis In this part of Andhra Pradesh. This reason is sufficient enough to be more aware of Donovanosis.

From Osmania General Hospital the incidence of Donovanosis for the period of 6 years was only 0.3%, but from Gandhi Hospital, Secunderabad the incidence for 1966-67 is 0.9%. This nearly three times increased incidence at Gandhi Hospital may be because of the Venereology Department at Gandhi Hospital deals with the floating population, coming to the city from various parts of the State; the station being very near to the Gandhi Hospital.

AGE INCIDENCE
TABLE II
Age & Sex Incidence

Age Group	Male	%	Female	%	Total	%
Below 15 Yrs.	—	—	2	6.9	2	2.6
16-20 Yrs.	3	6.5	7	24.1	10	13.3
21-40 Yrs.	43	93.5	18	62.1	61	81.3
Over 41 Yrs.	—	—	2	6.9	2	2.6
Total	46	61.3	29	38.7		

The youngest patient was 12 years old and the oldest 45 years in this series. In the age group below 15 years only 2 cases both females were found.

In the age group between 16-20 years the reported incidence is from 16% (Rajam-Rangiah 1932-1942) to 22.4% (Ramchander 1966). The incidence in our series is 17% which correlates well with the other reports. Another important finding is the unique male and female ration. According to our statistics the ratio is 1:2 with an increased incidence in female population which also conforms with the earlier reports of Ramchander 1966 where male-female incidence was 17.6% and 38.12% respectively. This increased incidence among female population in this age-group is explained by the earlier commencement of sexual life in females.

In the age group of 21-40 years the incidence is 81.3%. Rajam and Rangiah (1932-1941) reported the incidence as 70% and Ramchander (1966) reported an incidence of 69% in this age group. This is in conformity with the incidence of venereal diseases in general as the age group of 21-40 has maximum sexual activity.

In this age group males constituted 70.4% and females 29.6% of the cases. This frequency among males is due to the wider venues sought in sexual life.

SEX-INCIDENCE

Speaking irrespective of their ages males predominate the females. Amongst the total 75 cases 46 (61.3%) were males and 29 (38.7%) were females. The male preponderance is already reported by other workers in this field. The incidence amongst males was 67% in 858 cases reported by Rajam & Rangiah in 1954, and 71.7% in 867 cases reported by Ramchander in 1966.

MARITAL STATUS
TABLE III
Marital Status

	Single	Married	Widow	Widower	Divorced or Deserted
Male	17*	12	—	2	—
Female	2	13	2	—	5
Percentage:	19 (35.8%)	25 (47.5%)	2 (3.7%)	2 (3.7%)	5 (9.4%)

* were Homo-sexuals.

Thus amongst males 12 were married and 17 unmarried (59.9%). This increased incidence of the disease in unmarried males is because of the risk to which they are likely to be exposed. But Ramchander (1966) reported increased incidence among married males. The same author states that most vulnerable period for contacting this disease is during temporary separation from their wives.

Amongst females 13 (59.9%) were married 2 (9%) were unmarried, 2 (9%) were widowed and 5 (22.7%) were either divorced or deserted. Thus no less than 40% of cases occurred amongst widows, divorced or deserted wives. In addition a closer view of the so called married cases reveals many more of deserted wives, frequently exchanged mistresses and widows. In certain sections of population the marital bond is almost non-existent and partners are frequently discarded, and new partners are taken. This unhealthy sexual promiscuity is the background of patients suffering from Donovanosis. Added to this the ignorance of the wives when they notice the ulcer, makes them never to think that it might be an unwanted unknown gift from her husband though they come for treatment for fear of being deserted by their husbands because of this genital lesion. In all 25 cases (47.1%) were married, 19 cases (35.8%) were unmarried.

CONJUGAL CASES

In this series 28 out of 53 were either unmarried or were single due to various reasons in spite of previous marriage. It is very difficult to find out the transmitting partner for obvious reasons. Out of the married 25 patients there was one conjugal donovanosis. Even amongst married patients of both sexes, there is reluctance to get their partners for examination. Thereby true estimate of conjugal cases proves to be difficult. But a careful and intimate enquiry may spot more number of such cases, in some circumstances, the partner who first gets the disease may transmit this to the other partner. Spontaneous healing may then occur in transmitting partner and the transmitted partner may come up for treatment later. Thus further adding to the difficulties of true evaluation of conjugal donovanosis.

INCUBATION PERIOD

It is difficult to obtain correct information regarding the incubation period from patients who are promiscuous and expose themselves sexually frequently. Moreover Donovanosis in the early stages may not be noticed particularly in females. In this series only few patients could give correct information regarding the incubation period which ranged from 4 weeks to 1 year. In two cases, there was no extra-marital exposure for the last 5 and 7 years respectively. Neither their partners could be examined nor was there any historical evidence of Donovanosis.

LESIONS

69 (91.9%) cases out of 75 had genital lesions and 5 (6.6%) out of which had in addition lesion in the inguinal region and also over the scrotum. Only two cases had lesion solely in the inguinal region. 4 (5.3%) of cases had anal and perianal lesion. From Gandhi Hospital only 1 case (4.5%) out of 22 had lesion in the anal and perianal. In the rest that is 95.5% of cases the lesion was in the genital region. Totally 4

(5.3%) cases out of 75 had anal and perianal lesion. There was no case in this series with lesion in the oral cavity, mandible or other bones. Rajam and Rangiah (1932-41) reported 6% and Ramchander (1966) reported 2.9% extra genital Donovanosis.

TABLE IV
Distribution of lesions

Site	OSMANIA GENERAL HOSPITAL		GANDHI HOSPITAL			
	No. of cases	%	No. of cases	%	Total	%
Genital	49	92.4	19	86.5	64	85.3
Genital and groin or Scrotal lesions only	3	5.6	1	4.5	5	6.6
Anal & Perianal lesions only	3	5.6	1	4.5	4	5.3
Inguinal region without genital lesion	1	1.8	1	4.5	2	2.6

DURATION

In 7 cases (13.2%) the disease was of less than 1 month duration. In 20 cases (37.7%), it was 4 to 8 weeks. In 26 cases (49.05%) duration of the disease was more than 8 weeks. In 3 cases the patient had the disease for more than a year.

SOURCE OF INFECTION

In India the main source of infection in males was the prostitutes who are highly infective as compared to some highly advanced countries. Most of the women are of the promiscuous and of prostitute type. In most of the cases the exposure was in the coastal districts which are endemic for Donovanosis. But there was quite a few cases in the series who denied exposure in endemic places they had exposure in this part of the Andhra Pradesh or in other parts of Telangana. Those few cases that denied exposure in Andhra were previously either missed or misdiagnosed under various terms. It is possible these cases of ulcers are diagnosed as primary chancre (in the seronegative stage) resistant to penicillin.

SUMMARY

Incidence of Donovanosis in the twin cities of Hyderabad and Secunderabad has been evaluated for six years period from 1962 to 1967. This part of Andhra Pradesh is not endemic for Donovanosis and the incidence is one of the lowest. The statistic for the period of two years 1966 and 1967 from Gandhi Hospital shows three-fold increase in the incidence of Donovanosis as compared to the incidence from Osmania General Hospital. Reasons for this disparity have been discussed. Two years is too short a period to take this disparity into consideration and so further study of Donovanosis for a longer period is indicated. This part of Andhra Pradesh being the state capital has become potentially susceptible for Donovanosis on account of the floating population. The study of Donovanosis apart from the reasons given will be welcome to the students of Donovanosis as such reports from other part of this subcontinent

are few and far between and the need to evaluate this disease from other parts of India has been expressed many authors. ✓

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