THERAPEUTICS

LEDERKYN IN CHANCROID*

(A preliminary study on 50 Male patients)

By

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Sulfamethoxypyridazine (Lederkyn) is 3-Sulfanilamido-6-methoxypyridazine. It is claimed that the oral intake of the drug results in slow excretion and long lasting blood level. In the present study the effect of Lederkyn in patients of Chancroid is evaluated against the existing method of treatment with Sulphadiazine. The dosage employed for lederkyn is 1 gm. (2 tablets) on the first day, followed by 0,5 gm. (1 tablet) every day for 6 days. The routine treatment of Chancroid, till now in this department has been with Sulphadiazine in doses of 4 gms. (8 tablets) per day (1 gm. 6 hourly) for a period of 5 to 8 days.

MATERIAL AND METHODS

50 patients were included as subjects in the evaluation of the drug. The patients were selected at random. Another 50 patients of Chancroid, treated with Sulphadiazine before starting the study were randomly selected and compared to evaluate the efficacy of the drug.

The diagnosis of chancroid was based on clinical features and by the exclusion of syphilis. S. T. S. and darkfield examinations were done in all patients. The ulcers were nonindurated and necrotized. They also showed a tendency to bleed and were irregular in outline. The lesions were genital and of various sizes. Mostly they occured on the coronal sulcus, frenum or on the prepuce. The data are anylysed as follows.

TABLE I

Showing age distribution of 50 patients

Age group	Number	Per cent
15—19	6	12.0
20—24	20	40.0
25—29	14	28.0
30—34	3	6.0
35—39	3	6.0
40—44	4	8.0
Total	50	100.0
	Mean : 25.9	
	S D : 4.2	
	S E : 0.6	

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It can be seen from table I that 40% of the patients were in the age group 20–24 and 28% were in the age group 25–29. 68% of the patients were between the ages 20 to 29 years. The Mean was found to be 25.9 years with a S D of 4.2 years. The above was in conformity with the studies of Dr. Tampi and Rao (1956, 1958).

In the patients studied, 25 were single and 25 were married.

The lesions were single in 44% of patients and multiple in 56% as compared to the study of Tampi and Rao (1958) who found 37% as single and 62.2% as multiple lesions.

In this study 44% of patients showed the presence of ademitis as compared to 42.2% found by Tampi and Rao (1958). No case with bubo was seen.

TABLE 2

Showing source of infection in 50 patients with Chancroid

S. No.	Source of Infection	No.	%
1.	Marital (Wife)	4	8.0
2.	Prostitutes	8	16.0
3.	Casual acquaintances	18	36.0
4.	Friends and colleagues	6	12.0
5.	Married women	10	20.0
6.	Denied	4	8.0
	Total	50	100.0

It can be seen from the above table that infection was acquired from prostitutes by 16% of the patients. 76% acquired the infection from casual acquaintance and promiscuous women.

TABLE 3

Showing duration of chancroid in 50 patients

S. No.	Duration	Number	%
1.	3 days	3	6.0
2.	4—7 ,,	19	38.0
3.	8–15 ,,	21	42.0
4.	7–15 ,,	7	14.0
	Total	50	100.0

Mean 8.4 days
S. D. 4.97 ,,
S. E. 0.71 ,,

The duration was found to be below one week in 44% patients. 86% patients gave the duration as below two weeks.

Ducrey's Bacilli were seen in 4 patients (Or 8%).

TABLE 4

Showing response in number of days witn Lederkyn and Sulphadiazine

No. of days	With Lederkyn		With Sulphadiazine	
	No	%	No.	%
1	—	—	—	—
2	—	—	—	—
3	6	12-0	6	12-0
4	7	14-0	6	12-0
5	3	6-0	13	26-0
6	3	6-0	7	14-0
7	7	12-0	7	14-0
8	8	16-0	1	2-0
9	6	12-0	4	8-0
10 & over	10	22-0	6	12-0
	50	100-0	50	100-0
	Mean	6.2	6.04	
	S. D.	2.30	2.16	
	C. V.	37.01%	34.01	
	S. E.	0.33	0.31	

Table 4 shows the number of patients and the number of days by which the ulcers healed due to Lederkyn as compared to sulphadiazine.

The mean number of days for healing of ulcer was 6.2 with Lederkyn and 6.04 with sulphadiazine. The standard deviations and standard errors were observed as 2.30 and 0.33 for Lederkyn and 2.16 and 0.31 for sulphadiazine. The application of T test* to find the significance between the means also showed that there is no significant difference between the therapeutic effect of the two drugs.

DISCUSSION

During the year 1963, chancroid was diagnosed in 21.8% of V. D. cases attending this clinic. The incidence of syphilis (all stages) and Gonorrhea was 53.2% and 25% respectively. Other venereal diseases were rare and hence have not been considered.

*$t = \frac{\bar{x} - \bar{x}_2}{s}$

Where $s_{md} = s \sqrt{\frac{2}{(n)}}$ and $s^2_{md} = \frac{d^2 - E x^2_2}{2(n-1)}$

t — 0.3 dt. -98, P-70

The difference is not significant.

Tha variance ratio test also showed no significance.

If, however, infectious V. D. is taken in account, the incidence of chancroid was 37.0%, that of infectious syphilis 20.4% and Gonorrhea 42.6%.

These findings show that chancroid takes a place next to gonorrhea from public health point of view.

The maximum number of patients were between the age 20-29 years. There were 3 patients with mixed infections (6% of total); 2 with syphilis and one with Gonorrhoea. Phimosis was seen in 3 patients. In comparing the results of treatment with that of sulphadiazine it was found that the response to treatment was almost same. The administration of Lederkyn is more convenient than sulphadiazine. The cost of Lederkyn for a single patient of chancroid is Rs. 3.60 for Lederkyn and to Rs. 2.00 for sulphadiazine in an 8 days treatment schedule. Latest information regarding cost reduction from the manufacturers shows that now the cost of lederkyn now comes to about Rs. 2.25 per patient.

Thus the cost of both drugs is almost the same now. Easy administration of lederkyn confers a great advantage on this drug as compared to sulphadiazine. This is the most important factor which makes lederkyn superior to sulphadiazine. It is quite likely that patients may not take sulphadiazine 4 times a day. Moreover Alkaline mixture has also to be taken regularly to prevent crystaluria. Inspite of instructions patients may not realize the importance of alkaline mixture and may omit to take it thus exposing themselves to the hazards of renal damage. With lederkyn, the number of swallows is reduced to one a day and alkaline mixture is not necessary. Only plentiful of fluids by mouth serve the purpose.

The comparative values of these drugs may be summarised in the following table :—

	Lenerkyn	Sulphadiazine
1. Cost	Same	Same
2. Therapeutic effect	Almost same	Almost same
3. No. of swallows a day	One	Four
4. Convenience and reliability reg. intake	Good	Poor
5. Side effects	Almost Nil	Almost nil

No serious toxic reactions were observed either with lederkyn or sulphadiazine. The patients were followed up for 4 months and no relapse was seen either with lederkyn or sulphadiazine.

SUMMARY AND CONCLUSIONS

1. The use of sulphamethoxyyridazine (Lederkyn) was studied in 50 male cases of chancroid and compared to an equal number of cases treated with sulphadiazine. The periods of cure were found to be 6.2 days and 5.04

days with lederkyn and sulphadiazine respectively. Considering the statistical deviations the therapeutic response with both drugs was almos- the same. The cost of lederkyn compared favourably with that of sulphadiazine. The main advantage of lederkyn was the ease of administration and reliability regarding intake. This was the main single factor which made lederkyn superior to sulphadiazine.

2. 68% of the patients were in age group 20–29 years.

3. The lesions were single and multiple in 44% and 56% of patients respectively.

4. Adenitis was present in 44% patients which responded favourably with lederkyn. No bubo was seen.

5. 16% acquired infection from prostitutes and the rest from amateurs or promiscuous women.

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