

RESULT OF ANALYSIS OF SULPHONE NEGATIVE CASES OVER A PERIOD OF 4—6 YEARS

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Much has been written since the advent of sulphones in the treatment of leprosy, and over the years since its first inception in the year 1946 in the Lady Willingdon Leprosy Sanatorium, Chingleput, under the guidance of Dr. R. G. Cochrane, a number of sulphone derivatives, and the basic substance itself, have been under trial. These drugs have been administered both orally and parenterally.

This paper deals with the negative rate of sulphone treated cases who have been rendered symptom free and bacteriologically negative, and have remained so for an average period of six months. The average dose of drug and the average length of treatment that was necessary to render a case bacteriologically negative (Appendix I will be helpful to illustrate this) has been calculated.

Tables 1, 2, 3 and 4 give the details of each one of the negative cases under the various sulphone derivatives.

When sulphones were first claimed to be useful in the treatment of leprosy, workers in the field naturally adopted the rational of massive therapy, as is advocated for sulphonamide medication, so as to control the infection in the shortest period of time without giving the infecting agent time to assume resistant forms.

Here at this institution we have learnt to our cost, though no patients died, that massive dosage serves no more useful purpose than the very minimal average dose, which eliminates as far as possible the provocation of toxic symptoms. While it is true from our experience that we initially used relatively high doses of the sulphones, yet one interesting fact emerges, that it is not the quantity of drug that appears to be of importance, but the duration of regular treatment that is essential if satisfactory results are to be obtained. It appears that it will take not less than $2\frac{1}{2}$ to 4 years for moderate lepromatous cases to become negative in any appreciable numbers. Further it will be seen that the different forms of sulphones have produced almost the same negative rate in about the same period of time. It is, however, my opinion that any sulphone in oil dispersion is superior to the soluble and the oral sulphones. Again, from the economic point of view, the basic sulphone in whatever form it is used is the cheapest.

APPENDIX I.

Statement showing the results obtained in the various groups under Sulphone therapy over a period of 4—6 years.

Group	Total Lepromatous cases	Drug	Date of commencement	No. Bacteriologically negative	Average dose in Grammes	Average length of treatment in months	Negative rate
Bi & Gi	28		10- 1-50	9			
B & G	18*	Sulphetrone	9- 7-48	8**	340.28	34	44.5%
E	10*	in	9- 7-48	4**	404.3	38	40%
L	31	Oil 25%	10- 1-50	11			
		D.D.S. in					
A, D & F	28*	Oil 25%	9- 7-48	8**	200.36	40	28.5%
M & N	16*	Reduced from	9-11-48	8**	152.5	34	50%
Q		5cc—3cc—2cc	10-1-50	1			
		Sulphetrone Aquous 50%					
C & H	23*	7cc	9- 7-48	12**	603.75	42	52%
O	18*	7cc	8-11-48	5**	836.2	39	27.5%
P	12*	7cc + I.D.	26- 1-49	4**	647.1	36	33%
R	14*	3½cc + I.D.	26- 1-49	5**	461.85	37	35.5%
S	26*	3½cc	11- 5-49	6**	436.16	33	23%
Mi	189	4cc	6- 2-50	62			
Ni	94	4cc + I.D.	18- 2-50	40			
I	41*	Diasone	Sept. 46 and	19**	1115.7	43	46%
K	3	Sulphetrone Tablets	Sept. 48 16-10-46	1	7998	61	

Note:—* Total No. of cases treated over a period of 4 years = 206

** Total No. of Negative cases over a period of 4 years = 79

Average Negative rate is 38.35% over an average period of 37.5 months.

Sulphetrone in oil.

<i>Group No.</i>	<i>Date of commencement</i>	<i>Drug</i>	<i>Total dose in grammes</i>	<i>Length of treatment in months</i>	<i>Bacteriological result (5-6 months)</i>	<i>Date of Discharge</i>
G 3	10-7-48	Sulphetrone A. Oil 25%	184	18	Q	13-1-50
G 4	10-7-48	7cc twice a week	225.75	31	Q	7-2-51
G 5	10-7-48	From 6-3-51	429	46		
G 8	10-7-48	Sulphetrone Aqueous 50% 4cc	447	46	N	
B 3	9-7-48	Sulphetrone A. Oil 25% + I.D.	532	46	N	
B 8	23-7-48	7cc twice a week	110	10		2-5-49
B 9	23-7-48	From 5-3-51	525	46	N	
B 10	26-7-48	Sulphetrone Aqueous 50% 4cc	269.5	30		12-1-51
E 2	10-7-48	Sulphetrone H. oil	500	46		
E 3	10-7-48	7cc twice a week	218.75	17	N	7-12-49
E 5	10-7-48	From 5-3-51	510	46	N	
E 9	10-7-48	Sulphetrone Aqueous 4cc	388.5	43	N	11-2-52

N = Negative, that is sixteen smears at monthly intervals. Negative for six months.

Q = Quiescent. Similar number of smears. Negative for 3 months.

I.D. = Intradermal injections.

D.D.S. in Oil.

Group No.	Date of commencement	Drug *	Total dose in grammes	Length of treatment in months	Bacteriologic result (5-6 months)	Date of Discharge
A 1	10- 7-48	D.D.S. A. oil 25% + I.D. 5cc twice a week	204	25	N	23- 8-50
A 2	9- 7-48	10-1-50 reduced to 3cc 1-3-51 reduced to 2cc	209	34	N	14- 5-51
A 4	9- 7-48	Now Coconut oil	227	46	N	
D 2	9- 7-48	D.D.S. H. oil 25% 5cc twice a week	140	29		13-12-50
D 10	31- 8-48	10-1-50 reduced to 3cc 1-3-51 reduced to 2cc Coconut oil	203.85	42	N	
F 2	19- 9-47	D.D.S. A. oil 25% 5cc twice a week	310	56	N	
F 3	9- 7-48	10-1-50 reduced to 3cc 1-3-51 reduced to 2cc	142.75	44		21- 3-52
F 4	9- 7-48	Coconut oil	166.25	43	N	2- 2-52
M 1	9-11-48		125	28		2- 3-51
M 2	9-11-48	D.D.S. A. oil 25% + I.D.	60	12	N	13-11-49
M 3	9-11-48	3cc twice a week	130	27.5		25- 2-51
M 5	9-11-48	1-3-51 reduced to 2cc	184	46	N	
M 7	9-11-48	Coconut oil	81	18	N	31- 1-51
M 8	9-11-48		159	46	N	
N 1	9-11-48	D.D.S. A. oil 25% 3cc twice a week	164	46	N	
N 2	9-11-48	1-3-51 reduced to 2cc Coconut oil	153	45	N	4- 4-52

Sulphetrone Aqueous

Group No.	Date of commencement	Drug	Total dose in grammes	Length of treatment in months	Bacteriologic results (5-6 months)	Date of Discharge
D 6	27-7-48	Sulphetrone Aqueous 50%	326	46	N	
F 10	23-7-48	3½cc twice a week	257	46	N	
C 2	9-7-48	+ I.D.	773	46	N	
C 4	9-7-48	From 3-5-41 4cc 50% Aqueous	762	41	N	
H 1	9-7-48		732	46	N	13-12-51
H 2	9-7-48		579	31		
H 4	9-7-48	Sulphetrone Aqueous 50%	580	31	N	
H 8	9-7-48	3½cc twice a week	737	46	N	9- 2-51
H 10	3-8-48	From 3-5-51 4cc 50% Aqueous	782	45	Q	19- 2-51*
H 12	31-8-48		739	45		
H 15	10-7-48		531	46	N	
H 16	9-7-48		447	32	N	9- 3-51
O 1	8-11-48	Sulphetrone Aqueous 50%	609	24	N	
O 2	8-11-48	7cc twice a week	894	42	N	
O 3	8-11-48	From 19-3-51	894	42	N	4-11-50
O 4	8-11-48	4cc twice a week	887	42	N	
O 5	8-11-48		897	42	N	
P 1	26-1-49	Sulphetrone Aqueous 50%	739	40		
P 2	26-1-49	7cc twice a week	724	40	N	
P 3	26-2-49	From 2-3-51	364	27	N	22- 5-51
P 4	26-1-49	4cc twice a week	761.5	36.5	N	13- 2-51
R 1	26-1-49	Sulphetrone Aqueous 50%	337.25	27	N	20- 4-51
R 2	26-1-49	3½cc twice a week	498	39	N	
R 3	26-1-49	+ I.D.	492	39	N	
R 4	5-2-49	From 5-3-51 4cc twice a week	484	39	N	
R 5	26-1-49		498	39	N	
S 1	11-5-49	Sulphetrone Aqueous 50%	232.75	18	Q	7-11-50
S 2	11-5-49	3½cc twice a week	451.25	34.5	N	31- 3-52
S 3	11-5-49	From 5-3-51	483.25	36	N	26- 4-52
S 4	11-5-49	4cc twice a week	483.25	35	N	
S 5	11-5-49		483.25	36	N	
S 6	11-5-49		483.25	36	N	

* Relapsed—5-9-51.

DIASONE.

Group No.	Date of commencement	Drug	Total dose in grammes	Length of treatment in months	Bacteriologic result (5-6 months)	Date of Discharge
1.	1- 8-46	Diasone Average 4 tablets per day	1977	64	N	3- 1-51
2.	19- 8-46		1621.5	54	N	7- 2-51
3.	19- 8-46		1479.6	53.5	N	7- 2-51
4.	19- 8-46		1534	61	N	30- 9-51
5.	20- 6-47		2103.7	59	N	
6.	11-11-46		2012.5	66	N	
7.	6- 1-48		1115.8	24	N	1-12-50
8.	12- 9-46		1067.4	56	N	20- 4-50
9.	23- 9-48		1266.3	43	N	23- 4-52
10.	23- 9-48		1315.4	43	N	
11.	20- 7-48			35	N	8- 6-51
12.	12- 9-46			27	N	5- 2-49
13.	4- 8-48		857.9	40	N	4-12-50
14.	23- 9-48		808.5	29	N	15- 2-51
15.	23- 9-48		817.5	40	N	4- 2-52
16.	12- 9-46		810	29	N	25- 2-49
17.	12- 9-46		886.8	29	N	25- 2-49
18.	12- 9-46		655.8	27	N	15-12-48
19.	12- 9-46		768.9	33	N	11- 6-49
20.	16-10-46		Sulphetrone	7998	av. 42.78 61	N

It is interesting to note that out of the original diasone cases, 19 more became Negative, giving a percentage negative over an average period of 42.78 months.—EDITOR.

Other groups on lower dosages and oral DDS, Contiben and TBI have not been included in this paper, as the time is too short a period for a report.

CONCLUSION: Though it is obvious that the sulphones have come to stay in the treatment of leprosy, yet many a bacteriologically negative patient still requests the medical man to administer intradermal injections of hydnocarpus oil to hypopigmented patches, which frequently remain as residual after sulphone therapy.

Although sulphones are superior to the old hydnocarpus treatment, it is interesting to note that the period in which negative results are achieved has not been appreciably shortened, at least as far as the early or moderate lepromatous case is concerned.

SUMMARY

1. Result of sulphone therapy over a period of 4—6 years.
2. Theoretical considerations based on facts indicating that the period of regular treatment with sulphone is more important than the dosage or type of drug used.
3. Appendix I giving a tabular statement showing details of various groups of drugs and their average dosages and average period of treatment.
4. Details of the individual negative cases.

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