

STATISTICS IN CONNEXION WITH THE
TREATMENT OF ACUTE RHEUMATISM
BY THE SALICYLATES.

BEING AN ANALYSIS OF 1200 CASES AT
GUY'S HOSPITAL.¹
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GENTLEMEN,—I bring before you this evening a few statistics which I have procured in connexion with the treatment of acute rheumatism. Some four months ago, in consequence of a conversation which I had had with Sir William Gull, who, with Dr. Sutton, is working at the subject of the rheumatic state, I began to collect the cases which furnish the matter for my tables. I had already put together nearly 500 cases when Dr. Fagge spoke to me of the meeting to be held at the Medical Society, and suggested that it would probably be interesting to the Society if I placed a series on the same system of analysis as that followed by himself—the cases to be without salicylate treatment. This I have done; the results, such as they are, I have much pleasure in laying before you this evening. My figures deal with about 1200 cases treated at Guy's Hospital by different physicians. They relate exclusively to acute sthenic rheumatism, occurring in patients under thirty-five years of age. I think the members of the Society will concur with me in thinking this reservation an important one, the clinical history of acute rheumatism becoming more varied and complex after this period of life. The cases are taken consecutively from the clinical records preserved at the hospital. I have arranged my figures and facts under the following tables. First, a table in which 350 cases are placed in a form parallel to that brought before the Society on the evening of Monday, Dec. 9th, and published in THE LANCET of the same week; Dr. Fagge's cases being those under the salicylate treatment, whereas mine have been treated by various remedies not salicylate. This table shows the day upon which patients lost their pain and fever, reckoned from the commencement of treatment. It has appended the average duration of the illness before admission, and also the average time patients remained in hospital. For convenience of comparison, especially with regard to the length of stay in hospital—which point Dr. Fagge's table does not touch upon—I have taken from my own series 350 cases in which the salicylates were used, and I have treated these cases upon the same basis of arrangement, thus giving the day upon which pain left and the temperature became normal; and, further, as in my first table, giving a column which points out the average duration of the illness.

These cases, it must be remembered, are drawn from the same source as those of Dr. Fagge's, with this exception: Dr. Fagge made some slight selection with regard to the amount of drug used. My cases come consecutively from the records, and I have made no selection whatever. I think it right to call attention to this point, as under the circumstances it is natural that Dr. Fagge's table should give a somewhat different result from mine. I must ask you to refer to Dr. Fagge's table as a basis for comparison, my own salicylate table being simply complementary to his, and I think, as you will see, fully bearing out his statements.

In connexion with the above I have drawn up another table, in which, instead of averaging the duration of illness after admission, I have classified the discharges from hospital as follows,—the number of patients presented for discharge under ten, twenty, thirty, and forty days' respectively, a fifth column giving the number of patients remaining in hospital longer than forty days. This table in a large degree obviates the difficulty which we must experience in taking averages as our test for the length of illness. Here no long period in hospital of an individual patient can interfere with the general result. The one table may be looked upon as more than supplemental to the others; it gives us a standpoint from which we can test the accuracy and estimate the value of our averages.

TABLE I.—350 Cases Treated with Salicylates.

Day on which pain ceased and temperature became normal.	Number of cases.	Relapses.	Average duration of illness.
			Days.
1	13	3	36
2	32	6	34
3	46	7	32
4	40	6	36
5	37	9	35
6	19	7	40
7	22	7	38
8	13	0	42
9	15	3	35
10	14	1	42
11	7	4	45
12	7	1	44
13	3	0	34
14	4	0	34
15	3	0	32
16	4	1	31
17	6	2	39
18	7	0	52
19	6	1	50
20	4	0	39
21	1	0	23
22	1	0	54
23	5	2	57
24	4	2	60
25	5	1	57
26	2	1	51
27	1	1	92
28	2	1	64
29	0	0	0
30	1	0	42
31	2	0	48
32	5	0	64
33	0	0	0
34	2	0	71
Longer	5	0	64

TABLE Ia.—350 Cases Treated without Salicylates.

Day on which pain ceased and temperature became normal.	Number of cases.	Relapses.	Average duration of illness.
			Days.
1	2	0	31
2	7	0	20
3	11	2	24
4	17	5	27
5	20	0	31
6	19	1	32
7	24	0	36
8	20	0	26
9	21	3	39
10	18	1	33
11	12	0	45
12	16	0	31
13	17	0	29
14	11	2	42
15	7	0	34
16	10	1	42
17	10	0	37
18	7	0	40
19	6	0	32
20	7	1	48
21	9	0	38
22	4	0	39
23	8	0	38
24	4	0	44
25	5	0	49
26	8	0	43
27	2	0	43
28	2	0	44
29	5	1	58
30	5	0	56
31	1	0	37
32	2	1	51
33	3	0	86
34	2	0	46
Longer	31	1	64

¹ Paper read before the Medical Society on Dec. 19th, 1881.

TABLE II.—700 Cases divided into Series according to the Length of illness before Treatment. This table shows the average duration of time in hospital and average days upon which pain ceased. Half the cases were treated by salicylates, half without.

Patients ill seven days or less before admission.			
Duration of illness.		Cessation of pain.	
With salicylates, 37 days	.....	6th day	..... 55 cases
Without salicylates, 34 days	.....	13th day	..... 56 cases
With complications.			
With salicylates, 42 days	.....	9th day	..... 110 cases
Without salicylates, 40 days	.....	15th day	..... 100 cases
Patients ill more than seven days and less than fifteen before admission.			
With salicylates, 36 days	.....	9th day	..... 33 cases
Without salicylates, 39 days	.....	16th day	..... 30 cases
With complications.			
With salicylates, 41 days	.....	9th day	..... 71 cases
Without salicylates, 44 days	.....	12th day	..... 70 cases
Patients ill more than fourteen days and less than twenty-two before admission.			
With salicylates, 44 days	.....	11th day	..... 12 cases
Without salicylates, 43 days	.....	12th day	..... 12 cases
With complications.			
With salicylates, 35 days	.....	8th day	..... 17 cases
Without salicylates, 43 days	.....	16th day	..... 18 cases
Patients ill more than twenty-one days and less than twenty-nine before admission.			
With salicylates, 32 days	.....	4th day	..... 8 cases
Without salicylates, 43 days	.....	12th day	..... 4 cases
With complications.			
With salicylates, 42 days	.....	14th day	..... 11 cases
Without salicylates, 40 days	.....	9th day	..... 12 cases
Patients ill more than twenty-eight days before admission.			
With salicylates, 40 days	.....	7th day	..... 12 cases
Without salicylates, 23 days	.....	12th day	..... 6 cases
With complications.			
With salicylates, 46 days	.....	8th day	..... 20 cases
Without salicylates, 39 days	.....	12th day	..... 22 cases

TABLE III.—Showing in 1200 Cases the Number of Patients Discharged under 10, 20, 30, 40 days; 350 with Salicylates, 850 without.

350 Cases with Salicylates.					
Days.					Ill longer.
Under 10	20	30	40		
3	31	76	84	.....	160
850 Cases without Salicylates.					
Days.					Ill longer.
Under 10.	20	30	40		
12	105	175	182	.....	331

TABLE IV.—Showing the Number of Cases suffering from Heart Complications in 1200 Cases.

350 Cases with Salicylates.		
Subjects of primary rheumatism.	Subjects of previous rheumatism.	Total.
148	93	241
350 Cases without Salicylates.		
Subjects of primary rheumatism.	Subjects of previous rheumatism.	Total.
141	86	227
Second Series.—500 Cases without Salicylates.		
Subjects of primary rheumatism.	Subjects of previous rheumatism.	Total.
154	119	273

Seven hundred cases I have again taken ; half have been treated by salicylates, half without. I have divided them into series corresponding to the interval which elapsed between the commencement of illness and the admission of the patient into hospital. This table, you will see, embraces under its various heads a distinction between those patients who were suffering from any complications, and further gives the average date of loss of pain and of the duration of the illness.

A critical examination of these tables points out clearly and decidedly that patients taking salicylate lose their pains more quickly than those who do not take this remedy. Out of Dr. Fagge's cases, of 350, 288 lost their pains within the first nine days of treatment; in my own series of 350 cases treated in a similar manner, 247 patients lost their pain in the same period of time; whereas of 350 cases treated without salicylates, only 141 lost pain within the nine days. Is the effect stable? Apparently not, for on looking at the tables we shall see that the relapses among patients taking the remedy are vastly increased; and on further examining the average duration of stay in hospital, we find that patients taking this drug remain perceptibly longer under treatment. A scrutiny of my figures closely corroborates Dr. Fagge's statements that patients soon lose their pains, but are left feeble and exhausted after the use of this remedy.

Endeavouring to estimate the effect of salicylate treatment upon cardiac complication I have divided my 1200 cases into three series again—350 without, 350 with salicylates, and the remaining 500 without. The construction of this table gave me no little difficulty, for, as Dr. Fagge justly observed, "Much obscurity attaches itself to the interpretation of the cardiac murmurs heard during the course of acute rheumatism." However, I have felt bound to enter all those cases in which the heart was noted as being affected at some period or other during the time the patient was under treatment. Do not understand by this that I have included cases in which the sounds were mentioned as being rough, prolonged, or the like, but those cases only in which a definite bruit existed. The presence of such bruit would in most cases be endorsed by the opinion of the physician in charge. We find that among the 350 patients treated by the salicylates 241 suffered from heart affection of some kind or other; among the 350 treated without salicylates 227 suffered from this complication; of the 500 without salicylates 273 were affected. The proportion between the two classes is much the same, but what little advantage there is does not appear to lie on the side of the salicylate treatment. With respect to the treatment of acute rheumatism, this complication of heart affection appears to me one of the most important points for consideration. Acute rheumatism is an expression the sum of which comprises certain known factors—to wit, pain, fever, often dangerously high, and a liability to mischief of heart. There are, doubtless, other points which, for the moment, lie without the scope of our present inquiry. But weigh these several factors one with the other; the preponderance of one is wellnigh overwhelming. Any remedy vaunted as a specific in acute rheumatism must show in marked degree its efficacy in controlling—I would rather say in preventing—heart disease. On this one count alone salicylate acid must be prepared to stand its trial, and must further submit to the most severe cross-examination at the hands of the profession.

I have placed before you dry detail, but still facts, which may contribute in forming the skeleton of an inquiry the importance of which cannot be over-estimated.

ON THE TREATMENT OF ACUTE RHEUMATISM WITH SALICYLIC ACID.¹
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[DR. J. KINGSTON FOWLER brought forward some statistics which, by the permission of the physicians, he had obtained from the records of Addenbrooke's Hospital, Cambridge.]
Comparing my experience at King's College Hospital in 1876 with that at Addenbrooke's Hospital in 1878-79, I have been struck by the comparative absence of severe toxic

¹ Remarks made at the meeting of the Medical Society of London on Dec. 19th, 1881.