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Key passages

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THE TREATMENT OF LOBAR PNEUMONIA WITH REFINED SPECIFIC ANTIBACTERIAL SERUM *

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Because of the importance of treating patients at the earliest moment it was impracticable to alternate them by type, since often at least twelve hours would have been lost before this was determined. Patients were therefore taken alternately for antibody treatment or control, depending only on the order of their admission to the service. It was believed that with a sufficiently large series the distribution of cases by type would be equalized between the treated and the untreated group. That this actually has been the case is seen in chart 1, which shows the percentage distribution by type in the two groups.

The table of the combined series (table 2) shows in type I cases at Bellevue Hospital a ratio of difference in case fatality to error of 2.6, while at the Harlem Hospital the figure was 2.4. When these statistics are combined and the figures from the New York Hospital are included, this ratio becomes 3.7. The New York Hospital figures are too small for separate statistical valuation. Since statisticians regard a ratio of difference for standard error of 2 as significant, the combined figure of almost double this is very impressive. It is important also to note the effect which increasing the size of the series has on raising the ratio and thus rendering more valid the appraisal of the therapeutic result.

In type II pneumonia the figures for Bellevue Hospital are significant but the combined experience is less so, because at the Harlem Hospital there was less

difference in the serum and nonserum series. It should be noted that the death rate in the patients treated with serum at Harlem Hospital was less than at Bellevue Hospital—30 per cent as against 39 per cent—whereas in the untreated cases the death rate at Bellevue Hospital was 53 per cent, and at Harlem Hospital 32 per cent. The death rate for the untreated cases at Harlem was less than that of the treated cases at Bellevue. It chanced that in the season of 1928 there was only one bacteremic patient in the nonserum group at Harlem

TABLE 2.—Deaths per Hundred Cases in Patients with Lobar Pneumonia Treated With Serum and Without Serum

Experience of Bellevue, Harlem and New York Hospitals, 1927-1928											
Type	Cases	Deaths	Deaths per Hundred Cases		Cases	Deaths	Deaths per Hundred Cases		Difference in Case Fatality (A-B)	Ratio of Difference to Its Error	
Type I											
Combined experience.....	266	51	19	2.4	249	82	33	3.0	14	3.8	3.7
Bellevue Hospital.....	144	27	19	3.3	132	43	33	4.1	14	5.3	2.6
Harlem Hospital.....	114	23	20	3.7	100	37	34	4.5	14	5.8	2.4
New York Hospital.....	8	1	(13)		8	2	(25)		..	..	..
Type II											
Combined experience.....	176	61	35	3.6	165	74	45	3.9	10	5.3	1.9
Bellevue Hospital.....	107	42	39	4.7	95	50	53	5.1	14	6.9	2.0
Harlem Hospital.....	61	18	30	5.9	63	23	32	5.9	2	8.8	2
Type III											
Combined experience.....	82	27	33	5.2	92	27	29	4.7	4	7.0	.6
Bellevue Hospital.....	32	12	38	8.6	52	14	27	6.2	11	10.6	1.0
Harlem Hospital.....	47	15	32	6.8	33	12	32	7.6	0	10.2	..
New York Hospital.....	3	..	..	..	2	1	(50)		..	..	..
Miscellaneous types											
Combined experience.....	313	76	24	2.4	324	83	25	2.4	2	3.4	.6
Bellevue Hospital.....	131	39	30	4.0	128	51	40	3.3	10	5.2	2.0
Harlem Hospital.....	171	35	20	3.1	190	28	15	2.6	5	4.0	1.8
New York Hospital.....	11	2	(18)		6	4	(67)		..	..	..

Hospital, whereas there were nine in the serum treated group there. This is another evidence of the value of serum in the bacteremic cases and also of the need of a large number of cases to make the series comparable.