This consists of a comparison between the incidence of cases *with paralysis or paresis** in each age group with the ratio of suspect to positive cases as previously estimated. A high ratio of suspect to positive cases in one age group and a low ratio in another suggests that in the first age group the disease is less severe than in the second. We should therefore expect to find relatively fewer paresed cases in the former age group.

Figure X (page 100) shows this comparison graphically. On the right-hand side incidences of paresed cases are shown from the beginning of the epidemic to the end of March, 1948 (end of the initial surge, and of the period covered by the previous inquiry), and from then until the end of the year. It will be seen that in each age group the higher the ratio of suspect to positive cases, the lower the incidence of paralysis or paresis. The diagram also shows that the severity of the disease is greater in males than in females, except in the age group 10 to 15 years, when the opposite is the case.

Some confirmation is therefore forthcoming in support of ratios of suspect to positive cases arrived at in the previous inquiry. In that it is based on figures from a much longer period, and on data not available when these estimates were made, it is of interest, despite its admittedly doubtful reliability.

IX. PERCENTAGE AFFECTED IN DIFFERENT AGE GROUPS

By applying these ratios to the cumulative totals of positive cases in each age group, it is a simple matter to calculate the total numbers of persons who must have had the disease in one form or another since the beginning of the epidemic. If we also know the population in each age group in the area, we can discover what percentage of the total has been affected to date.

The accompanying diagrams (Figs. XI and XII) have been constructed accordingly. They apply only to the Auckland urban area. At the bottom of each chart the cumulative totals of cases, male and female, are shown month by month. The graphs indicate the presumptive progress of the epidemic in the age group as a whole. The reader will see at once, on glancing at Fig. XII, that this report carries the story to a most interesting and critical point. One age group, that of boys aged 10 to 15 years, had just touched 100 per cent. by the end of April, 1949.

* Figure V shows that the proportion of positive cases with paralysis or paresis varies enormously, and irregularly, between different localities. The irregularity is too gross to be accounted for by differences in age/sex composition, although wide variations also occur between the age groups. Cases to the end of 1948 from Auckland itself included the following percentages with paralysis or paresis:—

	Percentage of Cases With Paresis.		Percentage of Cases With Paralysis.	
	Males.	Females.	Males.	Females.
	Per Cent.	Per Cent.	Per Cent.	Per Cent.
0–	50	23	7	23
5–	29	24	6	12
10–	11	31	21	19
15–	27	33	45	28

It might be thought that the presence or absence of paralysis (or paresis) would be a more reliable criterion for statistical purposes than a clinical diagnosis on general grounds, but such does not seem to be the case. Epidemiologically paralysis is a mere accident, unpredictable, and totally unreliable as a standard of comparison.