SHIGELLA TYPE DISTRIBUTION IN JAPAN IN 1951

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Dysentery cases have been increasing in Japan since the end of the second world war. Especially in the year 1951, reported cases were largest during these years. The present paper is dealing with the typing of Shigella strains isolated in Japan during the year 1951, and forwarded to our laboratory mostly for type-identification and partly to meet our request. But the strains examined were not of the exact representation of true type distribution.

RESULTS OF EXAMINATION

Total number of the strains examined was 866 and the places from
Table 1

Institutions	Locations
Hospital of Inst. for Infectious Diseases	Tokyo
Tokyo First National Hospital	Tokyo
Joto Hospital for Infectious Diseases	Nagoya, Aichi
Prefectural Public Health Laboratory	Utsunomiya, Tochigi
"	Yamagata, Yamagata
Sakata Hospital	Sakata, Yamagata
Prefectural Public Health Laboratory	Nagano, Nagano
"	Kagoshima, Kagoshima
"	Wakayama, Wakayama
"	Maebashi, Gumma
"	Takamatsu, Kagawa
"	Nagoya, Aichi
"	Urawa, Saitama
"	Kyoto, Kyoto
"	Okayama, Okayama
"	Toyama, Toyama
National Police Reserve Laboratory	Tokyo
First Kosei Hospital	Nakakoma, Yamanashi
Fujin Kyoritsu Orphans' Hospital	Tokyo
Komagome Hospital for Infectious Diseases	Tokyo
Maizuru Kyosai (Mutual Aid) Hospital	Maizuru, Kyoto
Tokyo Railroad Hospital	Tokyo

which they had been forwarded were as listed in Table 1.

Serological type identification was carried out with the slide agglutination technique, using type and group-antisera. The results of biochemical examination were taken into consideration for further confirmation.

Table 2 Type-distribution of *Shigella* strains
isolated in 1951

Group	Type	No. of strains	Subtype	No. of strains
A	Sh. dysenteriae	1		
	"	2		
	"	3-7		
B	Sh. flexneri	1		
			1 a	
			1 b	
	"	2	2 a	
			2 b	
	"	3	3 a	
			3 b	
	"	4	4 a	
			4 b	
			4 c	
			4 d	
			4 e	
	"	5		
	"	6		
	" var.	X		
" "	Y			
C	Sh. boydii	1-7		
D	Sh. sonnei	132	Phase I	
			" II	
Total		866		

Among them, one strain is of group phase, two strains are mannitol-fermenting and the last one is mannitol-negative.

Among them three strains are of group phase, two strains are mannitol-fermenting.

In this table the numbers of strains in the third and fifth columns do not necessarily agree, because in the early stage of this survey some of the strains were only investigated for their type but not for their subtype.

The results were as summarized in Table 2. It is clear from the Table that *Shigella flexneri* 2 is the most prominent type. Type 2b is predominating a little more than 2a. The second important types are *Shigella sonnei*, *Shigella flexneri* 1b, *Shigella flexneri* 3a in order. Furthermore, all the types, which had been found in Japan, were found this time too. Of *Shigella flexneri* var. X, which had not been recognized of its existence until 1950, when Sasagawa reported a strain of this variant in Niigata, Japan in 1950⁽¹⁾, was found on three occasions this time (1951).

Before, neither of *Shigella flexneri* 4a nor 4b had been isolated in Japan⁽²⁾, but this time, 3 strains of 4a were found. Type 4b was not found. Among the strains of *Shigella flexneri* 4c and 4d examined, two strains in each of them were proved mannitol-positive. Among the strains of *Shigella flexneri* 3a examined, one strain did not ferment mannitol.

Occurrence of *Shigella flexneri* var. X in Japan was already discussed in a previous paper⁽³⁾. For these years, *Shigella flexneri* 2b had been predominating the type 2a as seen in Table 2, and this seems to be the reason why *Shigella flexneri* var. X has been reported from time to time in Japan during this period, because this type is the second phase (group phase) of *Shigella flexneri* 2b and splitting off from it.

SUMMARY

Type-distribution of *Shigella* isolated in Japan in 1951 is reported herewith.

REFERENCES

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