

Quebec

Distribution of *Streptococcus suis* capsular types in Canada in 1991

Between January and December 1991, a total of 663 isolates of *Streptococcus suis* was received for serotyping. Most of them (480) originated from the laboratoire de bactériologie clinique de la Faculté de médecine vétérinaire de l'Université de Montréal and provincial laboratories in Quebec. The other 183 isolates were received from western Canada, mainly Alberta. All isolates were recovered from diseased pigs. Serotyping was carried out using antisera prepared against all of the 29 official capsular types (1) with the coagglutination and capsular reaction techniques. The overall distribution of the 663 isolates of *S. suis*, according to capsular type, is given in Table 1.

In 1990, 561 isolates were serotyped, but, at that time, only 23 capsular types were known (2). Capsular type 2 represented 32% of all isolates, whereas in 1991, this percentage had decreased to 21%. An important decrease from 17% to 11% was also noted with untypable strains. This decrease was likely due to the fact that serotyping included six more capsular types in 1991. Capsular types 1/2 and 3 remained relatively prevalent, followed by capsular types 7 and 8. Capsular types 20 and 26 were not found in 1991.

In western Canada, the prevalence of capsular type 2 was lower (13%) than in Quebec (24%), and was similar to that of capsular type 1/2. Capsular types 7, 8, and 9 represented 8%, 7%, and 5% of isolates, respectively, whereas a complete absence of capsular types 14, 15, 20, 22, and 27 was noted in this region. This is the first report on the prevalence of the 29 capsular types of *S. suis* in Canada.

Table 1. Numerical distribution of capsular types of 663 isolates of *Streptococcus suis* recovered from diseased pigs in Quebec and western Canada in 1991.

Capsular type	No. of isolates	%	Capsular type	No. of isolates	%
1	11	2	15	7	1
2	138	21	16	12	1
1/2	79	12	17	9	1
3	77	12	18	8	1
4	24	4	19	12	2
5	19	3	20	0	0
6	1	<1	21	12	2
7	45	7	22	16	2
8	39	6	23	13	2
9	11	2	24	2	<1
10	20	3	25	3	<1
11	1	<1	26	0	0
12	3	<1	27	9	1
13	2	<1	28	14	2
14	1	<1	NT	75	11

NT = Untypable strains

References

- Gottschalk M, Higgins R, Jacques M, Beaudoin M, Henrichsen J. Characterization of six new capsular types (23 through 29) of *Streptococcus suis*. J Clin Microbiol 1991; 29: 2590-2594.
- Higgins R, Gottschalk M, Beaudoin M, Rawluk SA. Distribution of *Streptococcus suis* capsular types in Quebec and western Canada. Can Vet J 1992; 33: 27-30.

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Atlantic Canada

Hitra disease in Atlantic salmon

Hitra*, also called Cold Water Vibriosis, is caused by *Vibrio salmonicida*, and is being reported for the first time as occurring in North America. On July 19, 1989, mortality of fish in an Atlantic salmon marine cage site began to increase. At postmortem, the dead fish had many petechiae and ecchymoses, but there was food in their stomachs. That fish with septicemia were continuing to feed was considered unusual, because fish dying of bacterial septicemia often become anorectic first, and thus have an empty stomach on postmortem. Since oxygen demand is greatest during and just after feeding, low levels of oxygen in the water and impairment of oxygen

exchange at the gill epithelium, possibly due to saltwater costia or toxins damaging the gills, were investigated, but subsequently eliminated from consideration.

The character of the disease found on this farm was similar to that described for Hitra disease in Norway (1); for example, "a typical feature of Hitra disease is that the largest and fastest growing fish are the most susceptible, with some of them actually dying while eating". Hitra disease was not high on our list of differential diagnoses because it had never been reported in North America, and it occurred initially in cold water in Norway, where it was held responsible for losses up to 60% in some farms.