



Isolation of polioviruses from sewage and their characteristics: experience over two decades in Sweden.

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Abstract: Indigenous polio ceased in Sweden in 1962 after 5 years' use of killed polio vaccine. In 1967, it was considered of interest to investigate whether poliovirus was present in the sewage. A method for selective isolation of poliovirus from sewage was developed. The method appeared to increase the yield. The studies were carried out at intervals up to 1990. In 1989-90, the virus isolates were characterized by the use of monoclonal antibodies differentiating between vaccine-like (Sabin-like) and non-vaccine-like strains. Polioviruses of both kinds were isolated throughout the period. Two periods were of special interest. The first was in 1977, when a single, paralytic, type-2 case occurred in Sweden in an unvaccinated sect. The second was in 1984-85 when a type-3 epidemic broke out in Finland, followed by vaccinations of the whole Finnish population with live oral polio vaccine. On both occasions the implicated viruses could be traced to a high degree in sewage in Sweden. The absence of poliovirus isolations from faecal specimens of patients and the isolation of live poliovirus vaccine virus, i.e. a vaccine not used in Sweden, indicate that the virus strains are imported.

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