

Comparison of antigenicity of toxins produced by *Clostridium botulinum* type C and D strains.

Date: 1984

Abstract:

C1 neurotoxin of *Clostridium botulinum* strains C-Stockholm (C-ST), C beta-Yoichi, C-468, CD6F, and C-CB19 and type D toxin of strains D-1873 and D-CB16 were purified by gel filtration, ion exchange, and affinity chromatographies. The purified toxins had di-chain structure made of heavy and light chains. The toxins of C beta-Yoichi, C-468, CD6F, and C-CB19 reacted with anti-C-ST heavy chain and anti-C-ST light chain in immunodiffusion tests and enzyme-linked immunosorbent assay, whereas D-CB16 toxin reacted with anti-D-1873 heavy chain and anti-D-1873 light chain. However, C-6813 toxin reacted with anti-D-1873 heavy chain and anti-C-ST light chain but not with anti-C-ST heavy chain or anti-D-1873 light chain immunoglobulin G. These results indicate common antigens in the heavy chains of C-6813 and D-1873 toxins and in the light chains of C-6813 and C-ST toxins. Further, they provide evidence for heterogeneity within type C1 toxin subunits.