Use of Botulinum Toxin in Neurology

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Botulinum toxin (BoNT) is a natural neurotoxic protein produced by anaerobic spore-forming bacteria called Clostridium botulinum. The toxin prevents the release of neurotransmitter, acetylcholine from the presynaptic membrane at the neuromuscular junction by specific cleavage of SNARE (soluble N-ethylmaleimide-sensitive factor attachment receptor) proteins, leading to flaccid paralysis and botulism. There are at least seven serotypes of BoNT, labeled A through G. Therapeutic medical uses are currently only available for BoNT types A and B. The effects of BoNT are transient, nondestructive, and limited to the area administered in a dose-dependent manner. BoNT has been proved to be safe and effective for the treatment of various neurological conditions, including dystonia, spasticity, headache, and other central nervous system disorders related to excessive muscle contraction. Also, it has an impact on the autonomic nervous system, leading to its use in the management of autonomic dysfunctions, hypersecretory, and painful disorders. This session will present current data and guideline on the use of BoNT in treatment of neurological disorders based on the approved indications by Food and Drug Administration of Thailand (FDA) and the national list of essential medicines.

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