

pioneering collaboration between basic science investigators and clinicians has demonstrated the therapeutic properties of these biotoxins upon a local infiltration intervention, which is both effective and safe [115].

Conclusion

Paralytic Shellfish Poison Toxins, when are applied locally, have been established to be effective and innocuous in all the clinical trials. They showed a remarkable muscle relaxant and an amazing local pain killer effect. Both properties usually occur and aren't possible to separate, also are manifested almost instantly. Considering instantly, as the outcome relaxation and/or anesthetic effect measured and recorded in minutes after the injection. Neosaxitoxin, the most potent of all PSP toxins, also showed to be a strong long-lasting local anesthetic drug when was infiltrated along and even better when it was applied in combination with epinephrine or bupivacaine. The last one was the best Neosaxitoxin drug potentiation for the long lasting effect as pain killer. Without doubt for Neosaxitoxin, the best applications as a pharmaceutical drug are to come mainly by its faster high healing rate. On the other hand, considering the immobilization of healing tissues as a fundamental therapeutic principle, treatment with PSP toxins may be found to be applicable in other pathologies in which muscle hypertonicity results in stiff, awkward movements.

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