

Abstract Submitted  
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**An in vivo analysis of facial muscle change treated with botulinum toxin type A using digital image speckle correlation** YAN XU, SAMANTHA PALMACCIO PALMACCIO, DUC BUI, ALEXANDER DAGUM, MIRIAM RAFAILOVICH, State Univ of NY- Stony Brook — Been famous for clinical use from early 1980s, the neuromuscular blocking agent Botulinum toxin type A (BTX-A), has been used to reduce wrinkles for a long time. Only little research has been done to quantify the change of muscle contraction before and after injection and most research paper depend on subjective evaluation from both patients and surgeons. In our research, Digital Image Speckle Correlation (DISC) was employed to study the mechanical properties of skin, contraction mode of muscles (injected) and reaction of neighbor muscle group (un-injected). At the same time, displacement patterns (vector maps) generated by DISC can predict injection locus for surgeons who normally handle it depending only on visual observation.

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