NEUROLOGICAL PICTURE

Mimetic smile

(A) Volitional smile. (B) mimetic smile (with permission).

A 61 year old woman developed a left upper motor neuron VII nerve palsy and hemiparesis from an infarct in the right internal capsule. When asked to smile, the left side of her mouth did not retract as well as the right (figure A). However, when she smiled or laughed naturally, it was much more symmetric (figure B). This is the phenomenon of volitional versus emotional (mimetic) smile. The corticobulbar tract mediates the volitional smile, whereas fibres in the central tegmental tract that arise from the globus pallidus, thalamus, and hypothalamus mediate the mimetic smile. Thus in cases of selective involvement, the volitional smile may be impaired whereas the mimetic is not (as in this case) and vice versa.

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