

Teaching NeuroImages: Unilateral clubbing in hemiplegia

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Figure 1 Arm positions at rest

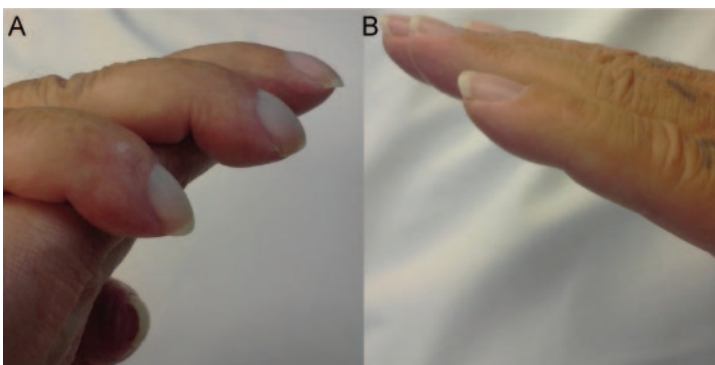


Symmetric view of the patient's arms, showing the pyramidal posturing at rest of the hemiplegic right hand.

A 64-year-old man was evaluated for seizures due to traumatic brain injury 25 years previously. Physical examination revealed aphasia, right hemiplegia, and clubbing of all fingers of the hemiplegic arm (figures 1 and 2). Digital clubbing is a bulbous beaked fingertip deformity due to hyperplasia of dermal fibrovascular tissue.

Advanced clubbing involves bony destruction in the distal phalanges (acro-osteolysis), with subperiosteal new bone formation from osteoblast proliferation. Bilateral symmetric clubbing is classically seen in congenital cyanotic heart disease and chronic suppurative lung conditions. Unilateral clubbing may occur secondary to local vascular cause (e.g., arteriovenous fistula), or more rarely in systemic conditions. Unilateral clubbing exclusively due to chronic hemiplegia is rare (~2% of cases¹), and may represent trophic changes secondary to local autonomic dysregulation.²

Figure 2 Right-sided finger clubbing



(A) The weak right hand, supported by the examiner, demonstrates finger clubbing. (B) The normal left hand seen in profile.

AUTHOR CONTRIBUTIONS

Both authors contributed equally to the study concept and design, acquisition of data, analysis and interpretation of data, drafting of the manuscript, critical revision of the manuscript for important intellectual content, administrative, technical, and material support.

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