

Clinical Quiz

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Clubbing in a patient with liver disease

Clinical Presentation

A 34-year-old patient presented with alcohol-induced hepatitis. He was a life-long non-smoker and his fingernails are shown in **Figures 1 & 2**. His hand radiograph was normal and he had no audible heart murmurs. He reported that other members of the family had similar finger appearances.



Figure 1 - Overall view of patient's hands.



Figure 2 - Profile close-up view of figure 1.

Questions

1. What is your diagnosis?
2. What differentials you can think of?
3. How you can establish the clinical diagnosis?

Clinical Quiz

Answers

1. Congenital (idiopathic) clubbing.
2. Differential diagnoses include: clubbing from chronic liver disease, clubbing from infective endocarditis, pachydermatoperiostosis, pseudoclubbing.
3. Schamroth's test.

Discussion

Finger clubbing, watch-glass nails, drumstick fingers, and Hippocratic fingers/nails are terms synonymous and interchangeable to define typical abnormalities of the fingers, which despite first noticed by Hippocrates, they still retain obscurity as regards to their pathogenetic mechanism. The Greeks refer to the sign as “plectrodactyly”, which literally means drum-stick fingers and it can really be a striking one. Finger clubbing typically described as developing over the years and in 4 stages. Initial periungual erythema and softening of the nail bed is followed by increase in the normal 160° angle between the nail bed and the proximal nail fold; eventually the nail and periungual skin appears shiny and the nail develops longitudinal ridging.

Common associations are lung diseases (such as, bronchogenic carcinoma, bronchiectases, pleural tumors, mesothelioma, empyema, pulmonary fibrosis), cardiac conditions (namely, cyanotic heart diseases, infective endocarditis), gastrointestinal diseases (namely, inflammatory bowel disease, coeliac, cirrhosis-mostly PBC), primary hypertrophic osteoarthropathy or pachydermoperiostosis (PHO-autosomal dominant), secondary hypertrophic osteoarthropathy (SHO; Marie-Bamberger syndrome, paraneoplastic). There are also cases of congenital-idiopathic clubbing, pachydermatoperiostosis (PDP) and pseudo-clubbing. PDP is a rare genodermatosis, characterized by pachydermia (thick skin), digital clubbing, periostosis, and an excess of affected males.¹ Pseudoclubbing, on the other hand, is the effect of soft-tissue collapse owing to severe bone erosions of the terminal phalanges (result of secondary hyperparathyroidism in cases of chronic renal failure).² It can easily be differentiated from true clubbing by the preservation of the nail-fold angle (Lovibond's angle) and characteristic bony erosions of the terminal phalanges on radiography.

Clinically, the flattening of Lovibond's angle is examined by apposition of the terminal phalanges of opposing fingers. This is the Schamroth's sign. Interestingly, Schamroth³ had not only described the sign, but himself was the patient. In a report published back in 1976, he described not only his 3 attacks of infective endocarditis, but also the clinical sign that bears his name. In our patient, chest radiograph and hand radiograph failed to any abnormalities and as his clubbing was present since his early years, the diagnosis of congenital clubbing was made.

References

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3. Schamroth L. Personal experience. *S Afr Med J* 1976; 50: 297-300.