

Yellow Nail Syndrome and Associated Internal Disturbances

Vitorino Modesto dos Santos^{1*}, Taciana Arruda Modesto Sugai², Laura Campos Modesto³,
Julia Campos Modesto⁴

¹Department of Medicine, Armed Forces Hospital, Brasília-DF, Brazil;

²American Society of Neurophysiology, and Dermatologist of Brasília-DF, Brazil;

³University Center of Brasília-DF, Brasília-DF, Brazil;

⁴Department of Medicine, Catholic University of Brasília, Brasília-DF, Brazil

Email: vitorinomodesto@gmail.com

Abstract

Nail changes detected during the general physical examination can contribute to establish initial diagnostic hypothesis and may enhance the awareness about some associated internal disorders. In approximately half of the cases, the changes are detected without being a present complaint. Main causes are dermatological diseases, infections, trauma, drug-related, and genetic entities. Yellow nail syndrome includes lung disorder, pleural effusion, and lymph edema of lower limbs; renal failure, hypothyroidism, malignant tumor, Saint's triad, and pericarditis are related with. The aim of the comments is emphasizing the role of nails evaluation to yield diagnostic clues.

Keywords: Clinical diagnosis, Nail, Yellow nail syndrome

Dear Editor,

Nail changes are easily observed during the inspection step of the general physical examination and may offer diagnostic clues on internal disturbances¹⁻¹⁰. Recently, we read the interesting paper by Goyal *et al.* highlighting the observation of abnormalities on this often neglected skin appendage. They emphasized clinical patterns, etiologies, and risk factors for various nail changes, and the role of accurate inspection of the nails during physical examination, in addition to the causal relationships between unguis abnormalities and some internal diseases. Their study included 200 outpatient individuals evaluated on an Indian tertiary care hospital, with the mean age of 37.98 ± 16.79 years, and male (1:1.29) predominance. The major number (60%) of the studied patients had between 21 and 50 years of age. Nail changes were detected in 54.5% of cases without this presenting complaint, while the patient was undergoing an examination for some dermatological or systemic disturbances. The fingernails

were affected in 42% of the patients, and 20 nails in only 10.5%. Dermatological disease was the major cause of nail changes (45%), followed by nail infections (36%), and systemic, traumatic, genetic, and drug-related etiologies (19%). Nail discolorations (91 cases) were as follows: Yellow (31.87%), black (28.57%), white (25.27%), green (8.79%), red (3.30%), and blue (2.20%), with more prevalence in onychomycosis. The authors highlighted that the nails deserve greater attention for systemic diagnoses¹. In this setting, may be appropriate to add commentaries on the yellow nail syndrome (YNS), a scarcely reported entity first described by Samman and White in 1964¹⁻¹⁰. Noteworthy, the syndrome has been considered very uncommon, but seems in fact underdiagnosed.

YNS may be characterized by the yellowish discoloration and dystrophic nails (thickening, hardening, increased convexity, transversal ridging, onycholysis, onychorrexia, paronychia, deficient cuticles, absence of lunules, and

*Author for correspondence

slow growth), associated with respiratory disturbances (asthma, bronchitis, sinusitis, bronchiectasis, pneumonitis, and pleural effusion), as well as lymph edema of the lower extremities¹⁻¹⁰. The diagnosis of YNS is established by two or three of the groups of manifestations, and the nail abnormalities may involve all digits and toes or spare some of them¹⁻¹⁰. Pericardial or ocular changes may occur, and in 30% of cases, the triad is complete²; lymphedema is the first manifestation in approximately one-third of the YNS cases⁴. Familiar and acquired cases occur, but the etiopathogenesis is unclear; lymph vessel disorders, autoimmune phenomena, hypoalbuminemia, and drug effects are cited¹⁻¹⁰. The YNS is more frequently reported in females, and occurring in all the age groups¹⁰.

Table 1 shows data of 10 Brazilian cases (90% women) of YNS, with an age range of 27–94 (mean: 73.8) years.

Table 1. Brazilian case reports of yellow nail syndrome with associated conditions

References (years)	Gender	Age	Associated disorders
Dos Santos <i>et al.</i> (2010) ¹	Female	61	Adnexal malignancy
Dos Santos <i>et al.</i> (2010) ³	Male	85	Half-and-half nails and renal failure
Santos <i>et al.</i> (2013) ⁵	Female	70	Onychophagia and Onychotrylomania
Santos <i>et al.</i> (2013) ⁸	Female	86	Hypothyroidism
Santos <i>et al.</i> (2014) ⁶	Female	78	Pincer nails
Dos Santos <i>et al.</i> (2015) ²	Female	76	Pincer nails and colon malignancy
Modesto dos Santos <i>et al.</i> (2015) ⁴	Female	94	Renal failure
Santos <i>et al.</i> (2015) ⁹	Female	72	Hypothyroidism and pericarditis
Santos <i>et al.</i> (2015) ¹⁰	Female	89	Pincer nails and Saint's triad
Santos <i>et al.</i> (2016) ⁷	Female	27	Hypothyroidism and renal failure

Data extracted from ten Brazilian case studies published between 2010 and 2016

Other changes were pincer (3) or half-and-half nails (1), and onychophagia/onychotrylomania (1); related disorders included renal failure (3), hypothyroidism (3), malignant tumors (2), Saint's triad (1), and pericarditis (1)¹⁻¹⁰.

The comments, herein, included aim to emphasize the importance of the nails attentive evaluation during the complete physical examinations, to yield diagnostic clues. This applies both to dermatologists and to the majority of the other medical specialties.

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3. Conflicts of interest

None.

4. Ethics Approval and Consent to Participate

Not applicable.

5. Consent for Publication

Not applicable.

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