

## CLINICAL STUDIES

### NAIL CHANGES IN SYSTEMIC DISEASES : A CLINICAL STUDY OF 435 CASES

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Nail changes often are reflectors of an internal disease. Four hundred and thirty-five patients admitted in the Medical, Surgical and Obstetric and Gynaecology wards were studied. Nail changes were seen in 134 which included clubbing (21.3%), longitudinal melanonychia (17.2%) and platonychia (14.2%). In patients with HIV associated pulmonary tuberculosis, clubbing was associated with an unique red "crescent sign"

**key words : Nails, Systemic disease, Red crescent sign**

#### Introduction

Nail abnormalities secondary to systemic diseases are important because they may be the initial sign of an underlying systemic disease. Systemic drugs may also affect the nails. The changes may vary from mild pigmentation abnormalities to onycholysis and nail shedding. Pigmentary abnormalities are usually due to antibiotics, anticancer drugs and antimalarials. Present study included 435 randomly selected patients from the Medical, Surgical and Obstetric and Gynaecology wards (OB and G).

#### Materials and Methods

Four hundred and thirty-five patients were studied between January '96 and July '97. They were randomly selected in-patients from Medical (175), Surgical (162) and OB & G wards (98). History elucidated included details of current illness, various therapeutic schedules adopted and the evolution of nail changes.

Systemic examination was followed by a detailed examination of the nail apparatus, at a regular interval of 6 months. Relevant laboratory investigations were also done.

In the Medical ward among 175 patients studied, 62 showed nail changes. They included clubbing (38%), melanonychia (16%) and platonychia (14%).

Others (32%) included, subungual haematoma, leukonychia striata, red crescent sign, chronic paronychia, white nails, bitten nails, onychomycosis, median nail dystrophy, arrested nail growth, cyanosed nail bed and onycholysis.

In the surgical wards among 162 examined 42 showed nail changes which included melanonychia (19%) clubbing (14%) and platonychia (11%).

Others included, leukonychia striata, leukonychia punctata, chronic paronychia, subungual haematoma, longitudinal ridging, pitting, red crescent nail, brittle nail and blue lunula.

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In the OB and G ward, out of 98 patients examined 30 were found to have nail changes that included chronic paronychia (16%), and melanonychia (16%)

Others included, leukonychia punctata, leukonychia striata, onychomycosis, pitting, subungual haematoma, longitudinal ridging, pterygium and clubbing.

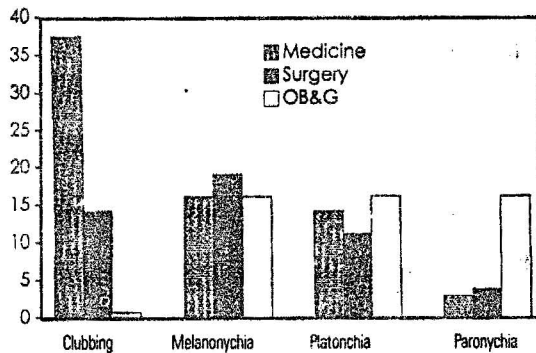


Fig: 1 Bar chart showing nail changes in Medicine, Surgery and OB&G

**Discussion**

One hundred and thirty-four patients (30.8%) of the total 435 subjects studied showed nail changes. The most frequent nail changes seen were clubbing (23.1%), longitudinal melanonychia (17.2%) and platonychia (14.2%). In the medical wards, clubbing was seen in 24 patients, 8 of which were secondary to pulmonary tuberculosis. A subgroup (3 patients) of these with associated HIV infection showed an interesting nail finding--"a red crescentic band in the distal nail bed" which may be mistaken for the half and half nail. These patients also had normal renal function tests.

In half- and half nail, a well-demarcated line separates the nail plate into a proximal dull

white portion and a distal red half.<sup>1</sup> This occurs in 10% of patients with chronic renal failure and

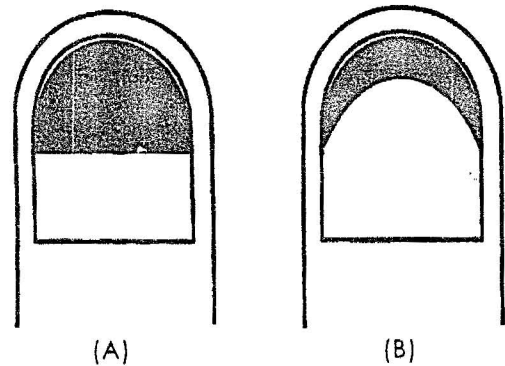


Fig 2. Schematic representation of half & half nail (A) and red crescent nail (B)

is unrelated to the severity of uraemia.<sup>2</sup>

Retrospective literature studies show an unpublished communication about an apparent increase in erythematous crescents in HIV positive patients whose intensity was directly proportional to the illness of the patients.<sup>3</sup>

Further specific studies are necessary to confirm the significance of the red crescent sign in patients with HIV and lung disease especially pulmonary tuberculosis. The same may be an indicator of indolent pulmonary tuberculosis.

**References**

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