



DERMOSCOPY AND SKIN IMAGING

## UTILITY OF HIGH FREQUENCY ULTRASONOGRAPHY (HFUS) IN THE DIAGNOSIS OF NAIL DISEASES

Swagata Tambe<sup>(1)</sup> - Kalpana Bhatt<sup>(2)</sup> - Chitra Nayak<sup>(3)</sup> - Hemangi Jerajani<sup>(4)</sup>

*Innovation Skin Clinic & Laser Center, Dermatology, Mumbai, India<sup>(1)</sup> - Ubm Institute & Dr Bhatt Sonography Center, Radiology, Mumbai, India<sup>(2)</sup> - Tnmc & Byl Nair Hospital, Dermatology, Mumbai, India<sup>(3)</sup> - Mgm Medical College & Hospital, Dermatology, Mumbai, India<sup>(4)</sup>*

Background: Diagnosis of diseases affecting the nail apparatus is often challenging and often require correlation between clinical, radiological and histopathological findings.

Objectives: To study HFUS findings in patients of Nail Diseases.

Methods: Clinical profile, HFUS findings and histopathological findings were studied

Results: HFUS findings observed in 31 patients is summarized in following table

Disease (No of patients)//HFUS findings

Onychomycosis (4)//Increase in the nail plate thickness with loss of the inter nail plate space

Longitudinal melanonychia (1)//absence of tumour

Psoriasis (3)//Increase in thickness of nail plate and the nail bed. Joint involvement – effusion/ fluid in interphalangeal joint space

Hematoma (1)//Increase in thickness of the nail bed with a hypoechoic echotexture and presence of internal echoes

Arterio-Venous malformation(2)//Heterogenous mass lesion with vascularity

Digital myxoid cyst(3)//Round anechoic structures with internal echoes

Glomus Tumour(5)//Hypoechoic mass lesions with positive probe tenderness and vascularity

Neuroma(1)//Well-defined hypoechoic or heterogenous mass lesions with mass effect

Periungual and subungual fibromas(2)//Uniform hypoechoic nodular/oval structure within the nail bed eccentrically

Soft tissue chondroma(1)//Hypoechoic mass lesion arising from dermis

Giant cell tumour of tendon sheath(3)//Heterogenous mass lesions arising from the tendon sheath

Ganglion(1)//Anechoic mass lesions in the dermal or sub-dermal region with tract communicating with joint space

Onychomatricoma(1)//Well-defined hypoechoic mass lesion arising from the nail matrix with





internal linear hyperechoic lines

Subungual exostoses & osteochondroma(2)//Nodular hyperechoic calcified mass lesions situated deep to the nail bed, arising from the underlying bone.

Melanoma(1)//Well-defined hypoechoic lobulated mass lesions in the sub-epidermal or dermal area with posterior acoustic shadowing and hypoechoic peripheral areas (peritumoral inflammation)

Conclusion: High frequency ultrasonography (HFUS) is very useful non-invasive tool in the diagnosis of nail diseases.

