

## Transillumination: A simple tool to assess subungual extension in periungual warts

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Transillumination is the technique of sample illumination by transmission of light through the sample.<sup>[1]</sup> In medicine, it has a variety of applications in fields such as skull base surgeries, dentistry, urology, and ophthalmology.<sup>[2-5]</sup> However, in dermatology, the use of transillumination has been limited to early detection of melanoma and on a detailed literature search; to the best of our knowledge, there was only one reference to this technique earlier in dermatology literature.<sup>[6-8]</sup>

Transillumination can be used as a simple tool to assess the subungual extent of periungual warts. This is especially useful in patients who have a very thick nail plate making visualization of the deeper extent of the wart difficult under normal light. It is a very simple bedside/office procedure. The lights in the clinic are turned off

and the flash light with a small mouth and Light Emitting Diode (LED) operated light source) is lit from the distal part with the mouth facing and in direct contact with the pulp (this would enhance the light penetration and also prevent the light leaking through the sides which may interfere in visualizing the lesion [Figures 1 and 2].

The main advantage is that it is a simple and cost-effective method as there is no extra investment or expensive apparatus required for it. Periungual warts are generally difficult to treat. The dermatologist has to at times resort to invasive procedures like nail avulsion to treat the warts effectively. Transillumination would ensure that nail avulsion surgery, which is an unwelcome and traumatic procedure for most of the patients,



**Figure 1:** Placing the light source in approximation to the pulp of the affected finger



**Figure 2:** Transillumination showing the subungual extent of the wart on the right index finger



**Figure 3:** Transillumination for onychomycosis

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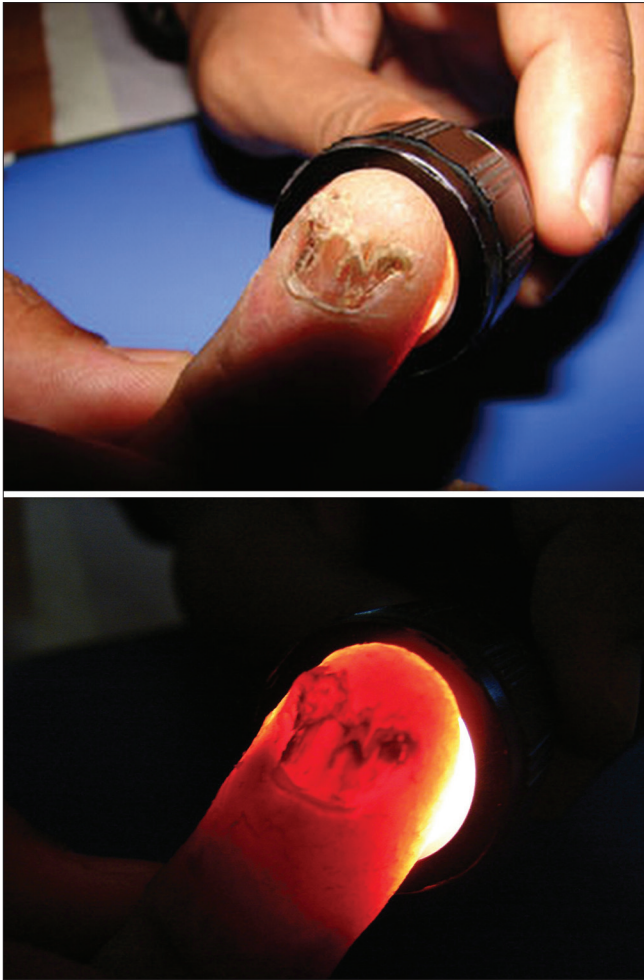
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**Figure 4:** Transillumination for nail psoriasis

is avoided. The technique also helps in winning the confidence of the patients who can visualize the problems themselves and therefore understand the rationale for surgical treatment if necessary.

Transillumination can also serve as an adjuvant diagnostic tool in other conditions affecting the nail like onychomycosis and psoriasis [Figures 3 and 4], though it has its own limitations.

There are various limitations to the said technique including the difference of intensity of the light that is transmitted in each individual due to the keratosis of the palmar or plantar skin and also the constitutional skin color. It may also be not satisfactory when the limb is not properly cleaned prior to the procedure. Further studies are recommended to assess the sensitivity and specificity of the technique which may help in further enhancing the utility in the dermatologist's diagnostic armamentarium.

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