
LASERS IN DERMATOLOGY: A TECHNICAL AND CLINICAL REVIEW

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SUMMARY

In the last ten years, the development of new, better-engineered lasers, has greatly increased their possible clinical applications, which range from the ablation of Port-wine stains and viral warts or other cutaneous lesions, like Jadasson's nevi sebacei, to nonsurgical applications, like phototoxic therapy in some cutaneous and noncutaneous malignancies.

This article explains the mode of operation and clinical uses of the most common kind of lasers now available in dermatological practice.

KEY WORDS

laser, operation mode, clinical uses

INTRODUCTION

With the development of better-engineered lasers, the applications of lasers in medicine increased. Not only the number of laser operations, but also the number of medical disciplines and specialists that utilize lasers has increased.

Operating the laser is important, but even more important is, the effort to understand and control the interaction between lasers and human tissue.

The Table 1 represents the major characteristics of the lasers that are commonly used in medicine:

MODES OF OPERATION OF MEDICAL LASERS

There are several parameters of the laser radiation which can be varied, depending on the system used and the particular application.

1) **Wavelength:** can be tuned in the dye lasers within a range of 20-40 nm using single dye and much broader (up to 400 nm) by exchanging the dye solution. Some lasers can operate in multiline regimen, e.g. Argon (10 lines in the range 440-514 nm), Copper (two lines) or may offer single interchangeable line operation.

