



ACADEMY OF MEDICINE, SINGAPORE

USE OF LASERS IN MEDICINE

PRACTICE GUIDELINES

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Preamble

In view of recent legislation requiring all laser owners and laser practitioners to be licensed, there is a pressing need for provision of appropriate training for laser users. It is imperative that doctors should be suitably trained before attempting to operate such equipment. The emphasis on training is to achieve an acceptable standard and a minimum defined experience under supervision.

Who are qualified to operate medical lasers

Hospital privileges are the responsibilities of the hospital governing body which may have a laser advisory/credentialing committee. These guidelines are issued to assist hospitals in their accreditation of laser users, to ensure that only appropriately accredited persons utilize laser facilities. The ultimate authority and responsibility for both the specific credentialing process and the delineation of medical staff privileges for doctors practising at the hospital rest with the institution.

The basic criteria for accreditation include :

1. attendance at an appropriate training course/ workshop of at least 8 – 10 hours duration on the use of a particular laser source which is organised by a recognised institution for postgraduate medical education. This course/ workshop should be conducted by accredited medical practitioners who are experienced in using the laser system in question;
2. evidence of appropriate hands-on training in one field of practice under the supervision of an accredited user in the successful treatment of at least 10 cases to the satisfaction of the supervisor;
3. maintenance of skills by continued practice;
4. evidence of competence in the relevant major speciality;
5. in cases where the laser is to be applied through an instrument such as an endoscope, full accreditation in the use of such instrument is mandatory;
6. where relevant, evidence of capability to perform the procedure by conventional methods.

As there are different laser machines each with its own unique light wavelength, tissue effects and safety precautions, accreditation criteria and eventual certification will be only applicable to the **specified** laser system e.g. CO₂ laser, Nd-Yag Laser or Argon Laser.

Training Programme

Recognised institutions for postgraduate medical education will be responsible for the conduct of training courses/workshops. A typical basic laser training programme or laser workshop programme should include coverage of the following:

- i) basic laser physics
- ii) basic features of the specified laser machine
- iii) laser-tissue interaction
- iv) indications and contraindications for laser treatment
- v) techniques
- vi) safety precautions
- vii) demonstrations of laser surgery
- viii) supervised hands-on practical experience.

The second component of training will be a period of clinical training under the supervision of a licensed/certified laser practitioner. It is suggested that at least 10 cases of laser treatments satisfactorily performed under supervision would be required. The supervised procedures should cover the range of commonly executed procedures relevant to the specialty of practice of the trainee.

A report from the supervisor will be required at the conclusion of the training programme.

Documentation

Documentation of laser usage is important for each type of laser. The laser power used and the treatment modality (pulse mode, continuous mode, etc) should be recorded. All complications and hazards encountered should be recorded and reported to the relevant laser safety committee. Not establishing a policy for appropriate documentation could have medical/legal ramifications.

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