Laser in surgery

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Laser is an acronym for II Light AmjJilification byStimulated Emission of Radiation II • The first laserwas built in 1960 by Dr. Maiman, using a. ruby rod as thelaser -medium. Ruby has a special propert:y of generatinglight of a single pure wave length when stimulated.The characteristics of laser beam ax'e monochromatic,coherent and very powerful that make it suitable for usein surgery.Laser has advantages as precision, E~d when used tocut tissues, the small vessels are sealEld along the lineof the incision, and the damage to the ELdjacent tissuesis much less than occurs with diathermy. In addition itpreserves sterility during surgery and minimises the postoperativepain. And recently discovered that, it is speci··ficforhaemato-porphyrins derivatives, so i~t is possible tobe used in diagnosis and treatment of ma'Ld gnancy ,Laser have been used in the past decade either a lightknife to cut tissues, and the CO2laser is used for thispurpose , or as hemostatic agent by dirllcting the beamdown a flexible endoscope to seal a blellding vessel in thebed of an ulcer, and in this case either the Neodymiumyttrium - aluminium garnet laser or argon laser are used.Fibl~roptic endoscopy has achieved mfLjor changes in thediagnosis and treatment of upper gastroi.ntestinal haemorrhage• 'Laser photocoagulation has been one of the recentendoscopic approachs in this field, it is very useful inbleeding peptic I1lcers specially in high risk group howcan not withstand surgery.Also there are many uses of laser in surgery as inmanagement of lung cancer in the field I)fthoracic surgery,and also used in urology, neurosurgery, vascular surgeryand in cutaneous and plastic surgery.Laser system are expensive and i~nobile, these represntsthe basic obstacles in the way of their application ,and if these difficulties are solved, l:aser therapy beoomewidely used •.As the future of laser application in Egypt, studiesshould be directed to manage bleeding oesophageal varicesand to apply laser in other fields.