USES OF LASER SCLEROSTOMIES

Essay

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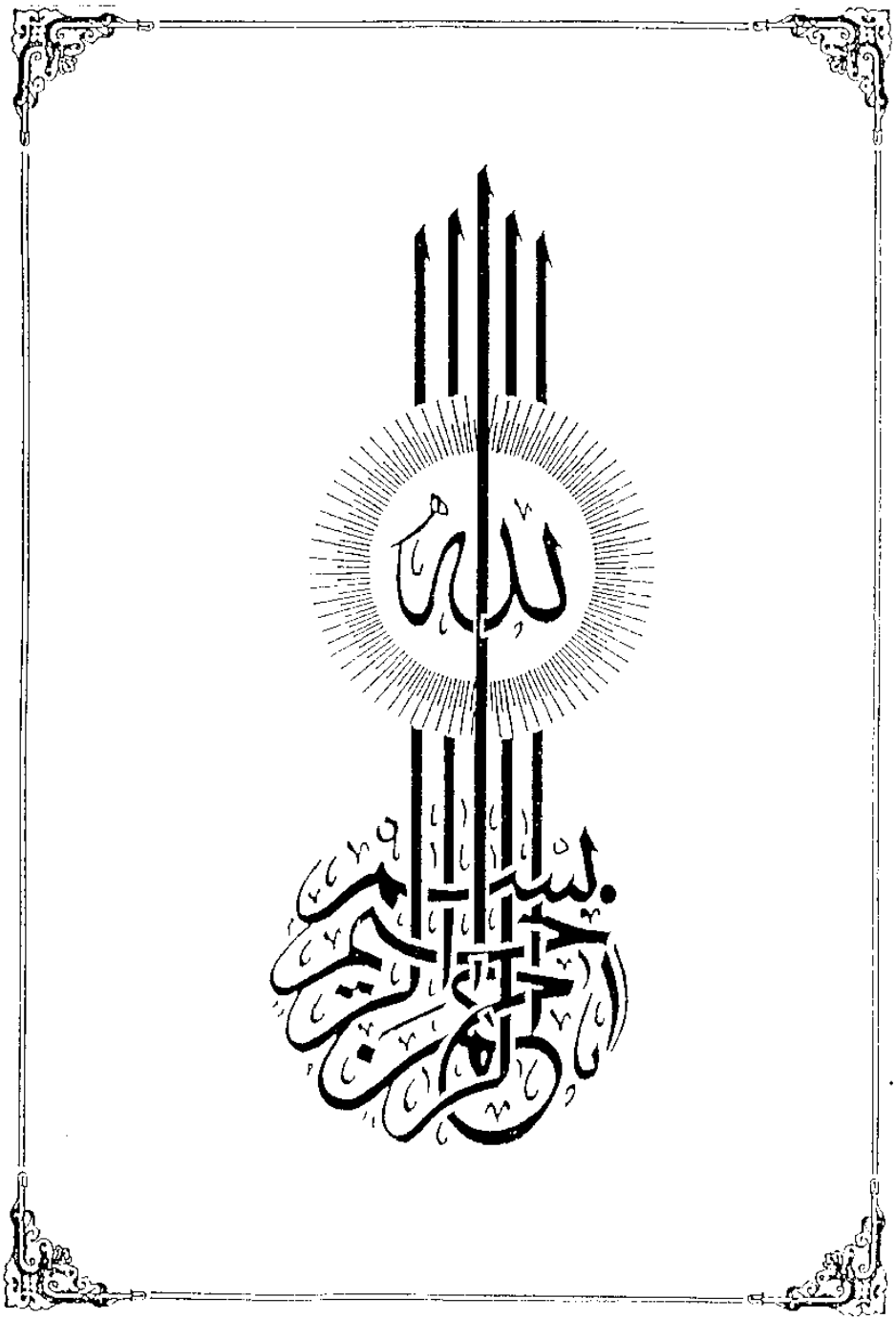

توقيع لجنة المناقشة :-

- ا.د. طارق توفيق البوالنصر (طارق)

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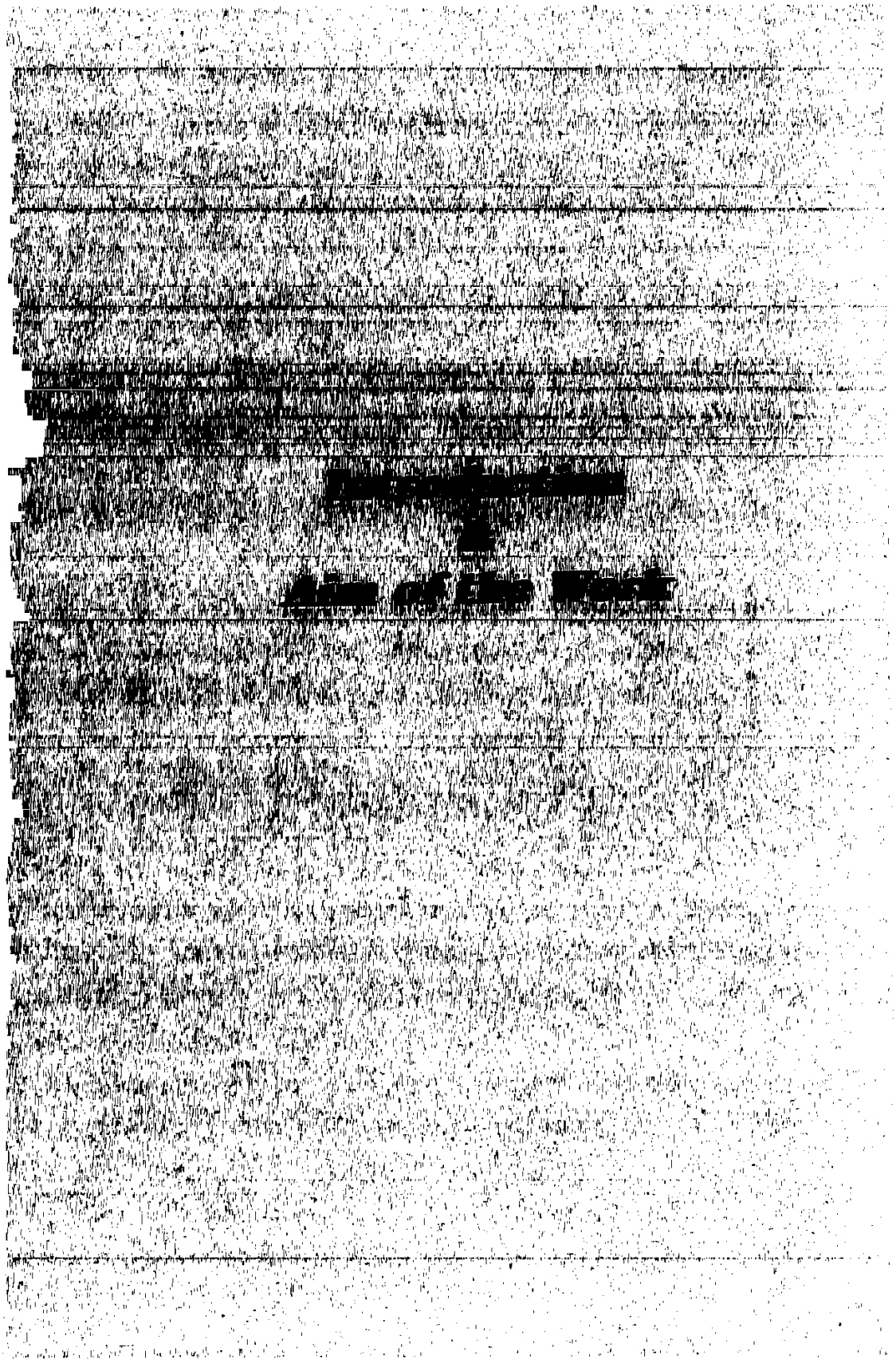
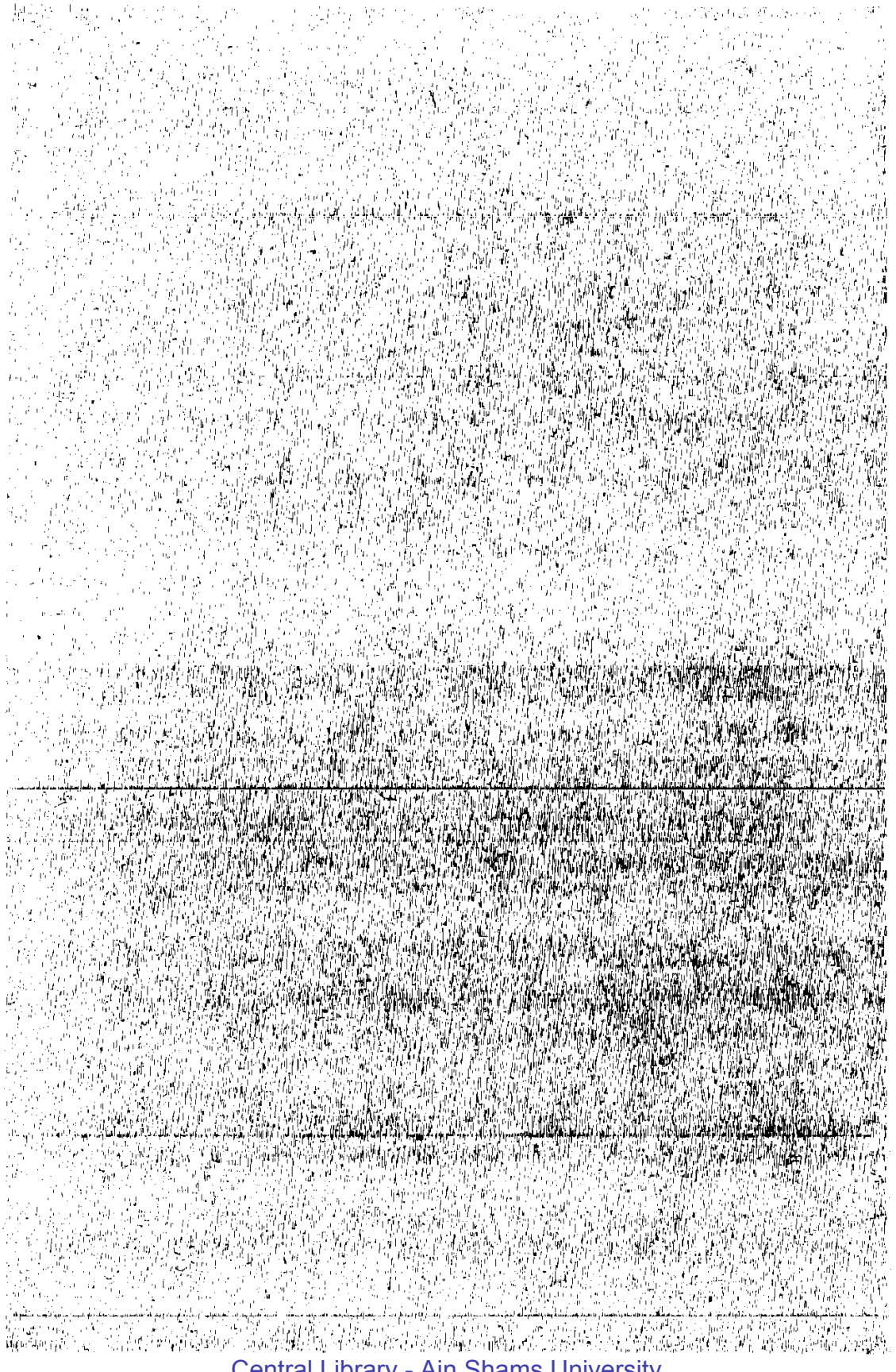
Nd: YAG: Neodymium Yttrium Aluminum Garnet.
THC: YAG: Thulium Holmium Chromium.
Nd: YLF: Neodymium Yttrium Lithium Flouride.
Er: YAG: Erbium YAG Laser.
HO: YAG: Holmium YAG Laser.
C. W.: Continuous Wave Mode of Laser.
GLS: Gonioscopic Laser Sclerostomy.
He-Ne: Helium Neon Laser Beam.
IOP: Intraocular Pressure.
RB5: Reactive Black 5 Dye.
PET: Partial External Trabeculectomy.
ELS: Excimer Laser Sclerostomy.
tPA: Tissue Plasminogin Activator.
GFS: Glaucoma Filtering Surgery.





INTRODUCTION

Laser sclerostomy as a technique to perform glaucoma filtration surgery is gaining increasing attention as an approach that could minimze complications and improve the long term success of filtration blebs, and it will undoubtedly become available alternative to conventional filtration surgery ***(Bruce et al., 1994).***

Conventional glaucoma filtration surgery has two principle areas of poor control: the reproducibility of fistular dimensions and the extent of tissue trauma which eventuates in fistula closure. Lasers help remedy these limitations by providing a more predictable and reproducible fistula size and by minimizing the manipulation of ocular tissue, thus deceiving the body's normal healing response ***(Michael S. Berlin, 1993).***

The subject of selection of best candidate lasers and safest delivery methods is a challenge to achieve the best results of predicability and long term survival of filtration fistulas. So, various types of lasers are currently available for creation of filtration fistulas including 'Nd': YAG, pulsed dye, argon, CO_2, Excimer, holmium (THC): YAG, erbium: YAG and Nd: YLF lasers ***(Iwash, et al., 1993).***

Lasers can be used to revise failing or hypofunctioning filters. Lasers offer the advantage of avoiding surgical entry into the eye. Both argon and Nd: YAG lasers have been used to revise failing filters. Nd: YAG lasers (mode locked or Q- switched) have the broadest application in revision of failing filters because of their ability to cut tissue, and unlike argon lasers, they neither coagulate nor require absorption by pigment to effectively disrupt tissue ***(Latina & Shields, 1993).***