

**COMPARATIVE STUDY OF THREE
DIFFERENT ANESTHETIC TECHNIQUES
USED FOR LIPOSUCTION SURGERY
(LIPOEMULSIFICATION)**

THESIS

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M.D. Degree In Anesthesia*

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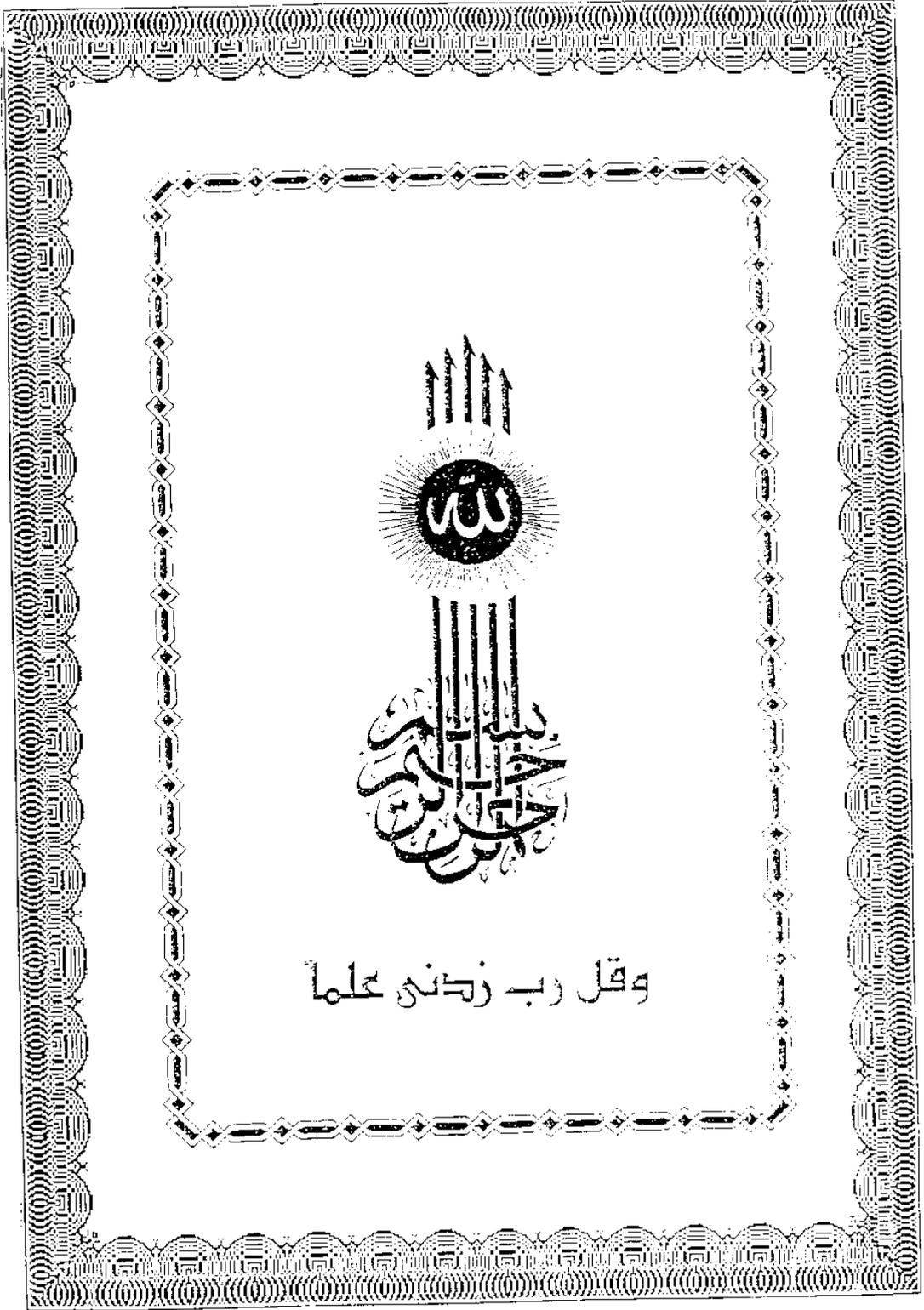
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Acknowledgment

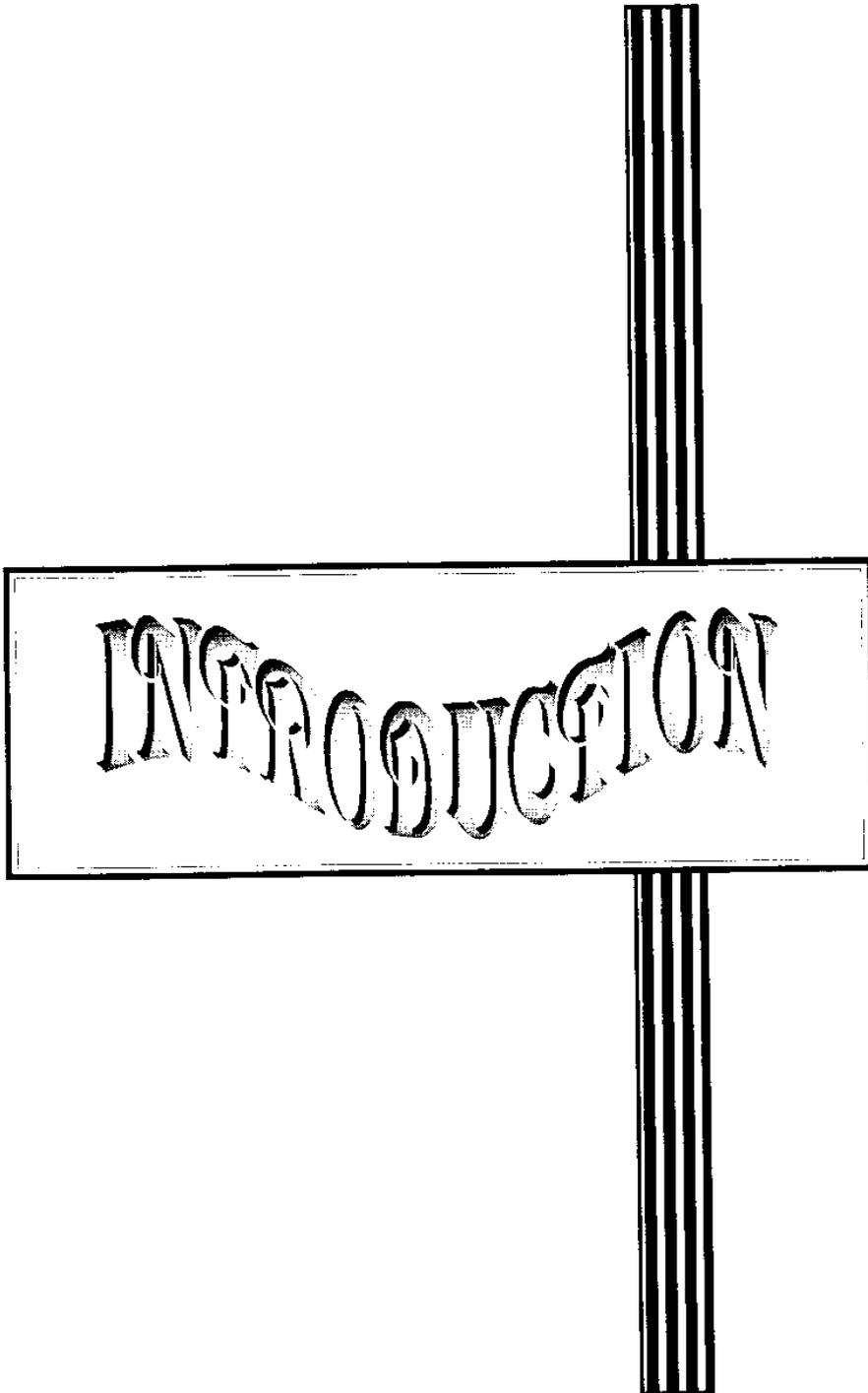
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INTRODUCTION AND HISTORICAL PREVIEW

Liposuction is a surgical technique that improves body contour by removing excess fat without open surgery (*Zocchi M.,1992*). Since the first time *Fischer in 1976* has the idea to use suction device to remove the fat tissues from the body without open surgery, many advances in the technique and equipments have made liposuction safer and effective to be the most commonly performed cosmetic procedure (*Dolsky RL., et al., 1987*).

Initially, the technique of liposuction was the dry technique in which liposuction was done using a large fenestrated cannula that passes into subcutaneous (s.c.) tissues through a small skin incision connected to a suction apparatus. During the procedure there is destruction of some fibrous septa and s.c. blood vessels. In case of massive liposuction there is massive blood loss which leads to hypovolemia, hypotention and even shock state that needs blood transfusion (*Badran H.S., et al., 1993*).

With advancement of equipments and techniques, the wet technique was developed in which variable amount of diluted epinephrine 1/100 000-1/200 000 was injected into s.c. fat, and after waiting a period of 10-30min liposuction is

begun (*Lillis P.J., 1990*).

The Tumescence technique is a new one which is a modification of the wet technique giving a dramatic improvement in the efficiency and clinical results. In this technique after sedation of the patient or induction of anesthesia, a cocktail of lidocaine 0.05 - 0.1%, epinephrine 1/1000 000 and sodium bicarbonate in normal saline is infiltrated into the targeted fat producing swelling and firmness. This tumescence of fat permits an increase in surgical accuracy and, minimize post operative blood loss (*Klein JA., 1990*).

Epinephrine in concentration of 1/1000 000 leads to vasoconstriction (V.C.) decreasing the systemic lidocaine absorption and prolonging the duration of its action. Sodium bicarbonate reduces the pain caused by the acidic epinephrine / lidocaine solution (*Raymond S.A., et al., 1989*).



