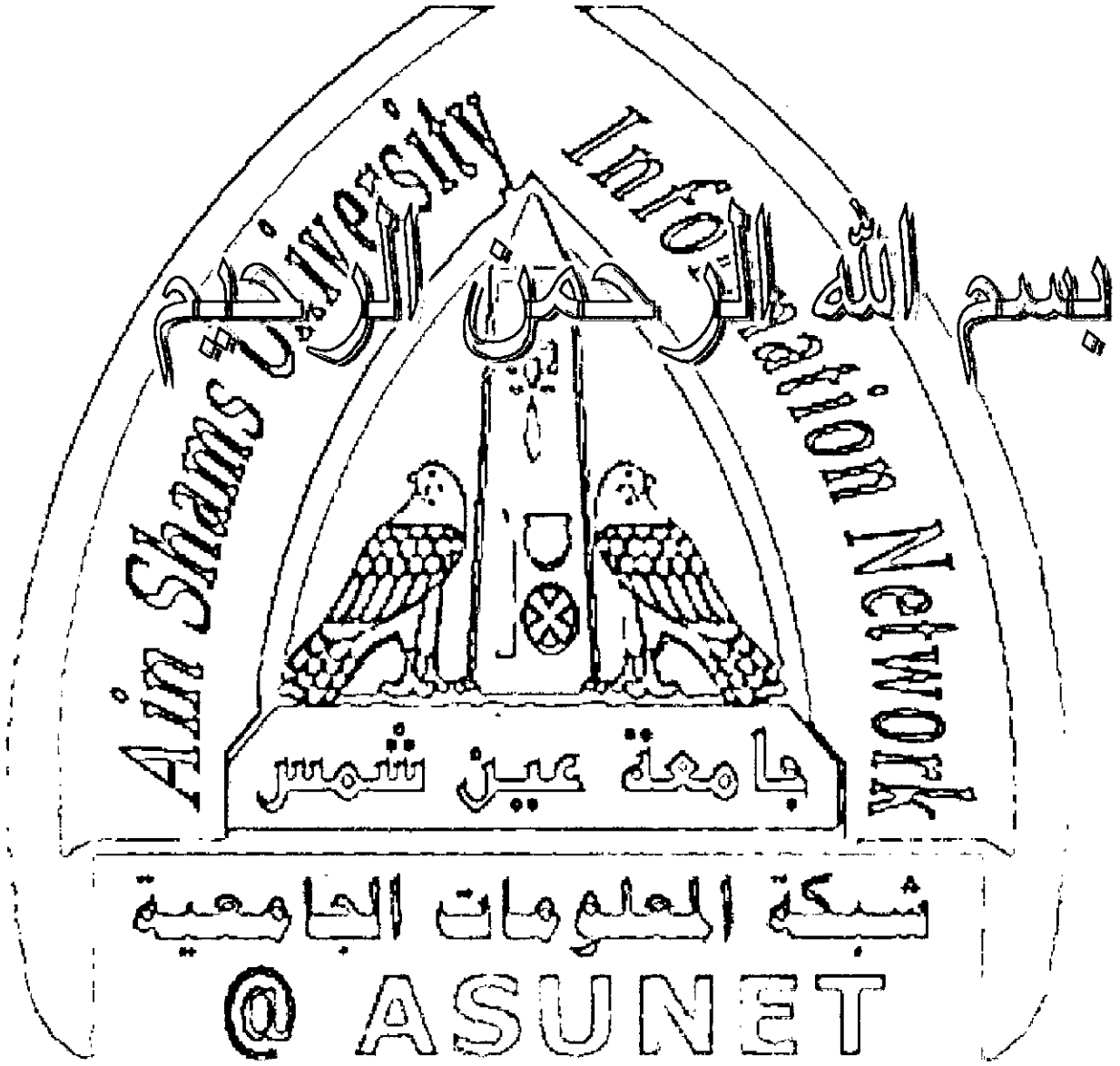
شبكة المعلومات الجامعية



شبكة المعلومات الجامعية

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التوثيق الالكتروني والميكروفيلم

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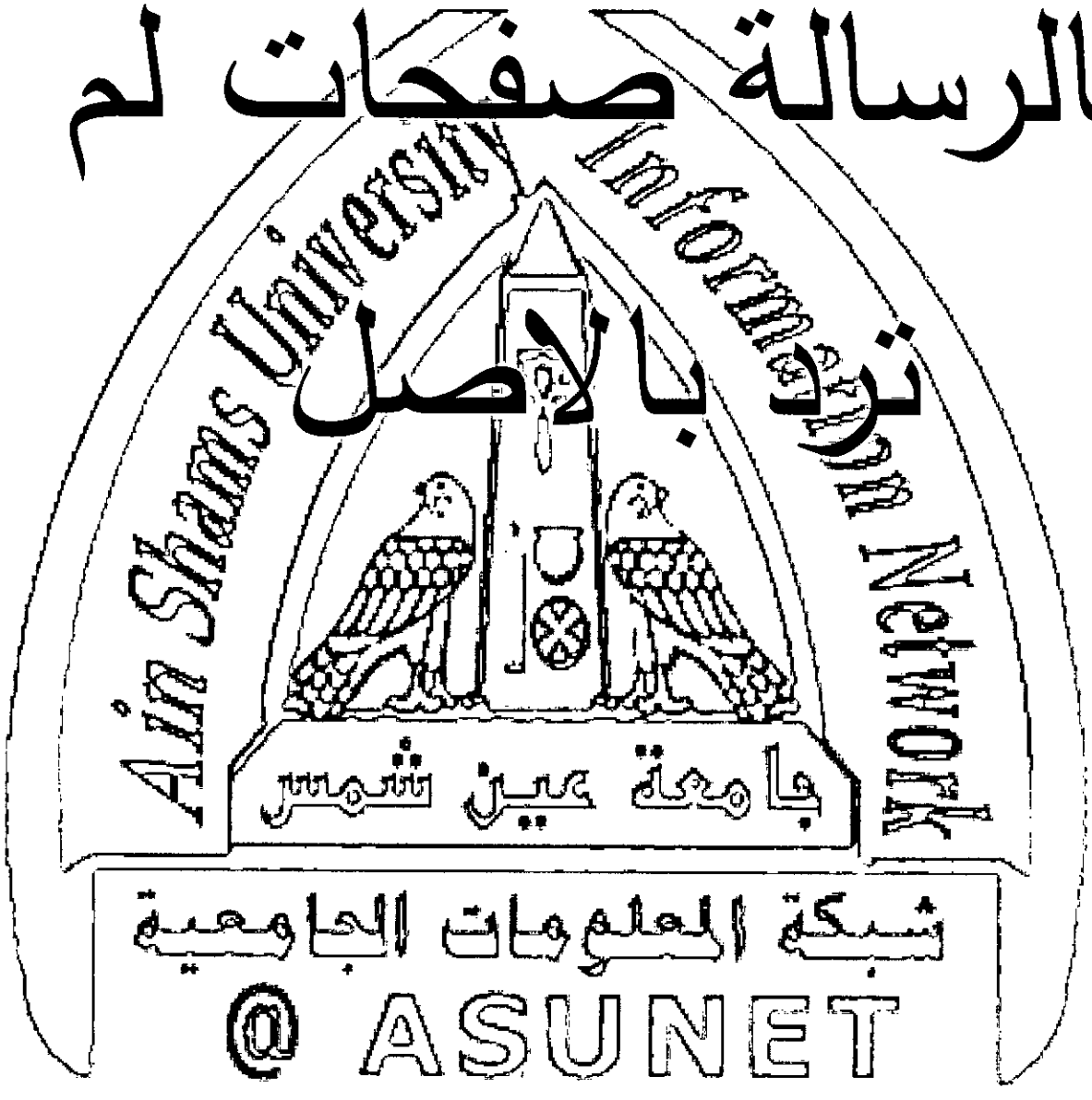

بالرسالة صفحات لم ترد بالأصل

INTRAVENOUS MAGNESIUM THERAPY FOR CHILDHOOD BRONCHIAL ASTHMA

THESIS

Submitted for Partial Fulfillment of Master Degree

In

Pediatrics

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بسم الله الرحمن الرحيم

قالوا سبحانك لا علم لنا إلا ما علمتنا

إنك أنت العليم الحكيم

صدق الله العظيم

" البقرة ٣٢"

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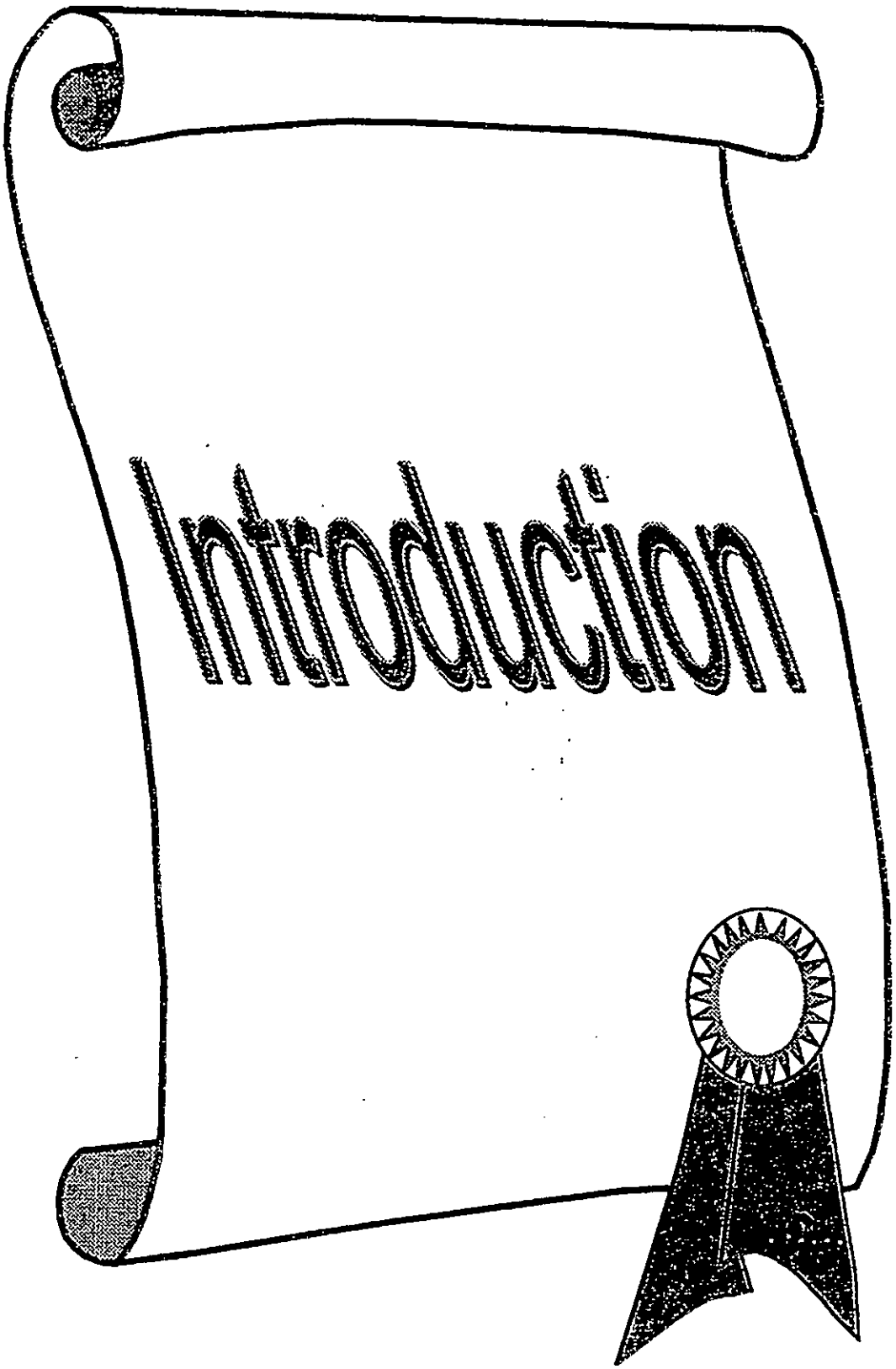

Introduction

INTRODUCTION

Bronchial asthma is a frequent cause of emergency wards visits and hospital admissions[1].

β_2-adrenergic agents have been the primary focus of emergency management of acute bronchial asthma for over 50 years. Despite their effectiveness for most patients, 30% of patients presenting to emergency wards fail to respond adequately to β_2-agonists and require hospitalization[2].

Other therapeutic agents that could improve air flow obstruction early would be of great benefit. One drug that has been claimed to reverse bronchospasm in patients refractory to β_2-agonists is magnesium sulphate[3].

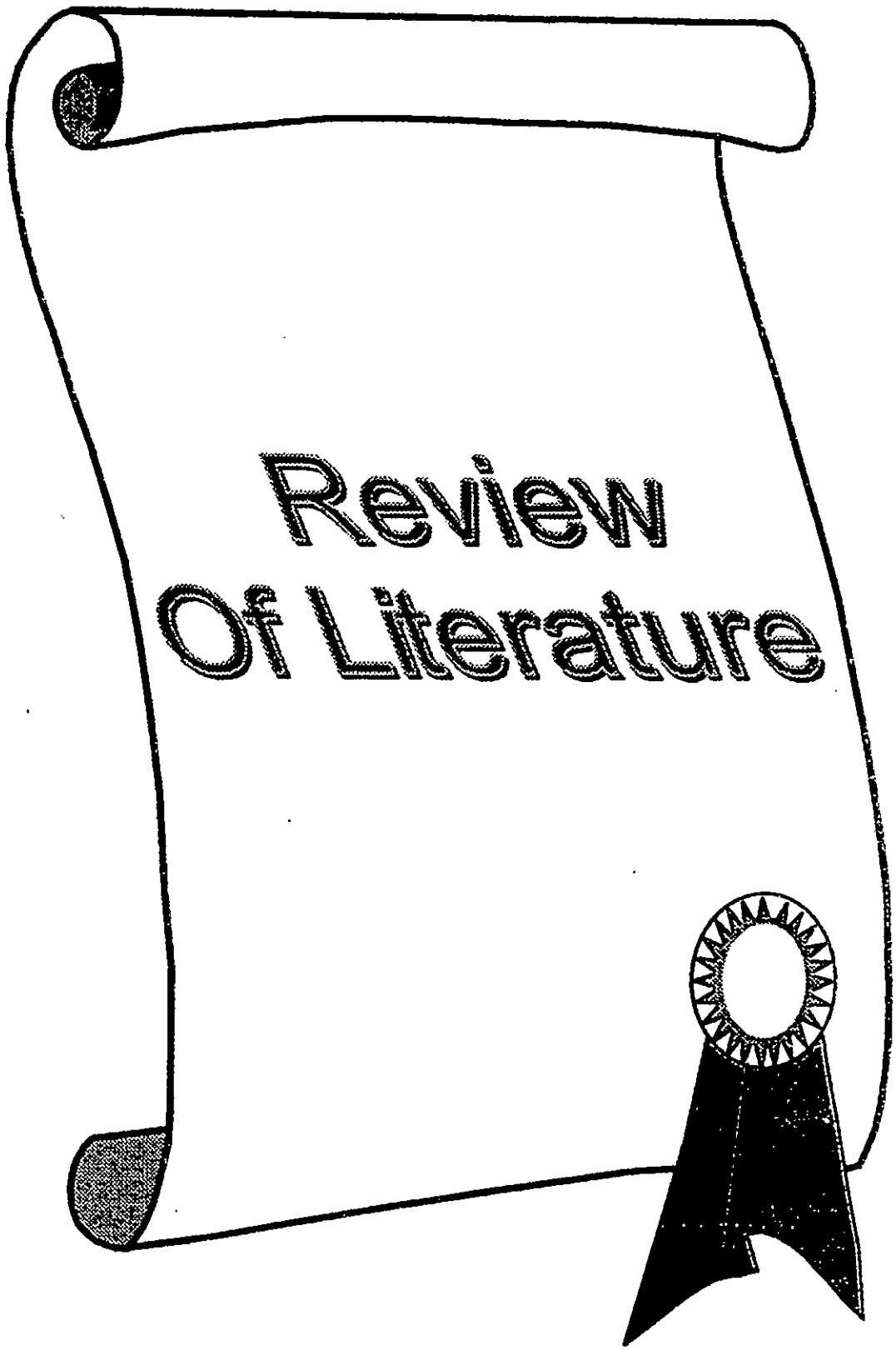
Magnesium is the fourth most abundant metal in the body. It plays a crucial role in numerus biological processes. It is a natural calcium antagonist. It has been reported to have an inhibitory action on smooth muscle contraction, on histamine release from mast cells and on acetylcholine release from cholinergic nerve terminals in addition to its sedative action[4].

It has been suggested that intravenous magnesium sulphate is a safe and effective adjunct to the treatment of acute asthma in adults[5,6]. However, a recent clinical trial failed to show its efficacy in these patients[7].

In childhood asthma, Pabon et al., in (1994) described four children with severe asthma exacerbations who received I.V Mg infusions, 40 mg/Kg, these patients demonstrated improvements in clinical asthma score, PEFR and partial pressure of arterial carbon dioxide[8]. Also Ciarallo et al., in (1996) concluded that children treated with intravenous magnesium infusions, 25mg/Kg for moderate to severe asthma had significantly greater improvement in short-term pulmonary function without any significant alteration in blood pressure[9].

Controversy still exists about the optimal bronchodilator dose of I.V. Mg sulphate and the rate of its administration[10]. In poor responders to beta adrenergic agents, studies are lacking which compare the added bronchodilator effect produced by I.V magnesium with that of I.V aminophylline.

The present work was designed to evaluate the efficacy of different doses of I.V. magnesium in controlling asthma exacerbations and to compare this with the bronchodilator effect of I.V. aminophylline in children poor responders to nebulized high dose β2-adrenergic agonists and I.V. corticosteroids.


Review
Of Literature