

**SACRAL ULCERS & DIFFERENT SURGICAL  
TECHNIQUES FOR THEIR COVERAGE  
(CLINICAL STUDY)**

**THESIS**

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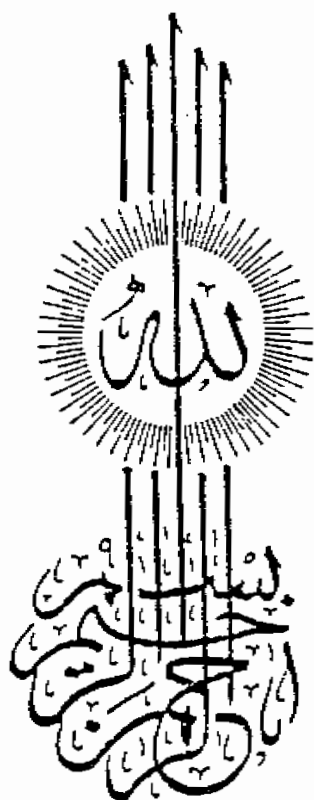
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﴿ وعلمك ما لم تكن تعلم ﴾  
وكان فضل الله عليك عظيما ﴿

صدق الله العظيم [النساء ١١٣]



**TO...**

*To every one taught me a letter ..*

*To my parents ..*



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# **Introduction and Aims of the work**

The first part of the paper discusses the importance of understanding the underlying structure of the data. This is particularly relevant in the context of machine learning, where the ability to identify patterns and relationships in the data is crucial for making accurate predictions. The second part of the paper focuses on the development of a new algorithm for analyzing time series data. This algorithm is designed to be more robust to noise and to better capture the underlying trends in the data. The third part of the paper presents the results of a series of experiments that compare the performance of the new algorithm to that of several existing methods. The results show that the new algorithm is able to outperform the existing methods in a number of key metrics, including accuracy and computational efficiency. Finally, the paper concludes with a discussion of the implications of these findings for future research and for the practical application of the new algorithm.

## INTRODUCTION

An ulcer is defined as loss of continuity in an epithelial surface (*MacSween & Whaley, 1992*).

Cutaneous ulcers are often associated with infection and usually imply a chronic problem (*Puckett & Silver, 1992*).

Sacral ulcers are mostly caused by **Pressure sores**, but they may be due to other causes: **Non-specific** ulcers caused by local irritation with burn, radiation induced (*Evans & Goldberg, 1993*), etc ..., **Specific** ulcers as tuberculous, syphilitic, **iatrogenic** as following removal of tumors e.g chordoma, lumbosacral and sacrococcygeal myelomeningocele or after excision of pilonidal sinus (*Rintoul, 1995*) or **Malignant** ulcers.

Pressure sore is an area of tissue necrosis due to excessive pressure, often occurring at the site of a bony prominence. Pressure sores affect paraplegics, quadriplegics as well as patients suffering from limb fractures, cardiovascular or debilitating diseases (*Phillips & Robson, 1990*). Sacral sores come in the second place after ischial sores in their prevalence followed by trochanteric sores. Pressure sores present a significant problem. They affect the general condition of the patient as well as the local complications occurring in association. Economically, this is a major problem. By 1987, the cost of care for these pressure sores had risen to \$25,000 (*Phillips & Robson, 1990*).

Thinking of management of pressure sores started by the ancient Egyptians. Hipocrates gave his advice in

the treatment of these ulcers (*Majno, 1980*). Many theories about the cause of pressure sores evolved last century. In the years between World War I and World War II, the medical profession advanced in its care of trauma. Surgical management of pressure sores ranges from excision of the sore and simple closure till the use of skin flaps, myocutaneous and fasciocutaneous flaps and even free flaps (*Yamamoto et al., 1992 and Anthony et al., 1992*).

Myelomeningocele is a congenital disease of the central nervous system characterized by open neural tube and hernial protrusion of the spinal cord. It is a common disease of newborns occurs in 1.0 to 1.5 per 1000 live births in North America, and it is even commoner in Egypt (*Humphreys, 1985*). The etiology of the disease is unknown. Management includes manipulation of potentially viable neural tissue, dural closure and coverage by skin either directly or using flaps to aid in closure.

Pilonidal sinus is an acquired condition caused by hairs penetrating the skin at the natal cleft and setting up a foreign body granulomatous reaction (*Patey & Scraff, 1946*). Surgical management includes evacuation of the abscess formed, total excision of the sinus tracks, together with all their ramifications with primary wound closure or gauze packing without suture to be left for granulation (*Rintoul, 1995*) or coverage by local flaps.

Tumors related to the sacral region include sacrococcygeal teratoma which is one of the most