بسم الله الرحمن الرحيم

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تم رفع هذه الرسالة بواسطة / مني مغربي أحمد

بقسم التوثيق الإلكتروني بمركز الشبكات وتكنولوجيا المعلومات دون أدنى مسئولية عن محتوى هذه الرسالة.

ملاحظات: لا يوجد

USE OF DRAINS IN SPINE SURGERY SYSTEMATIC REVIEW & META ANALYSIS

Thesis

Submitted for Partial Fulfillment of Master Degree in Orthopedic surgery

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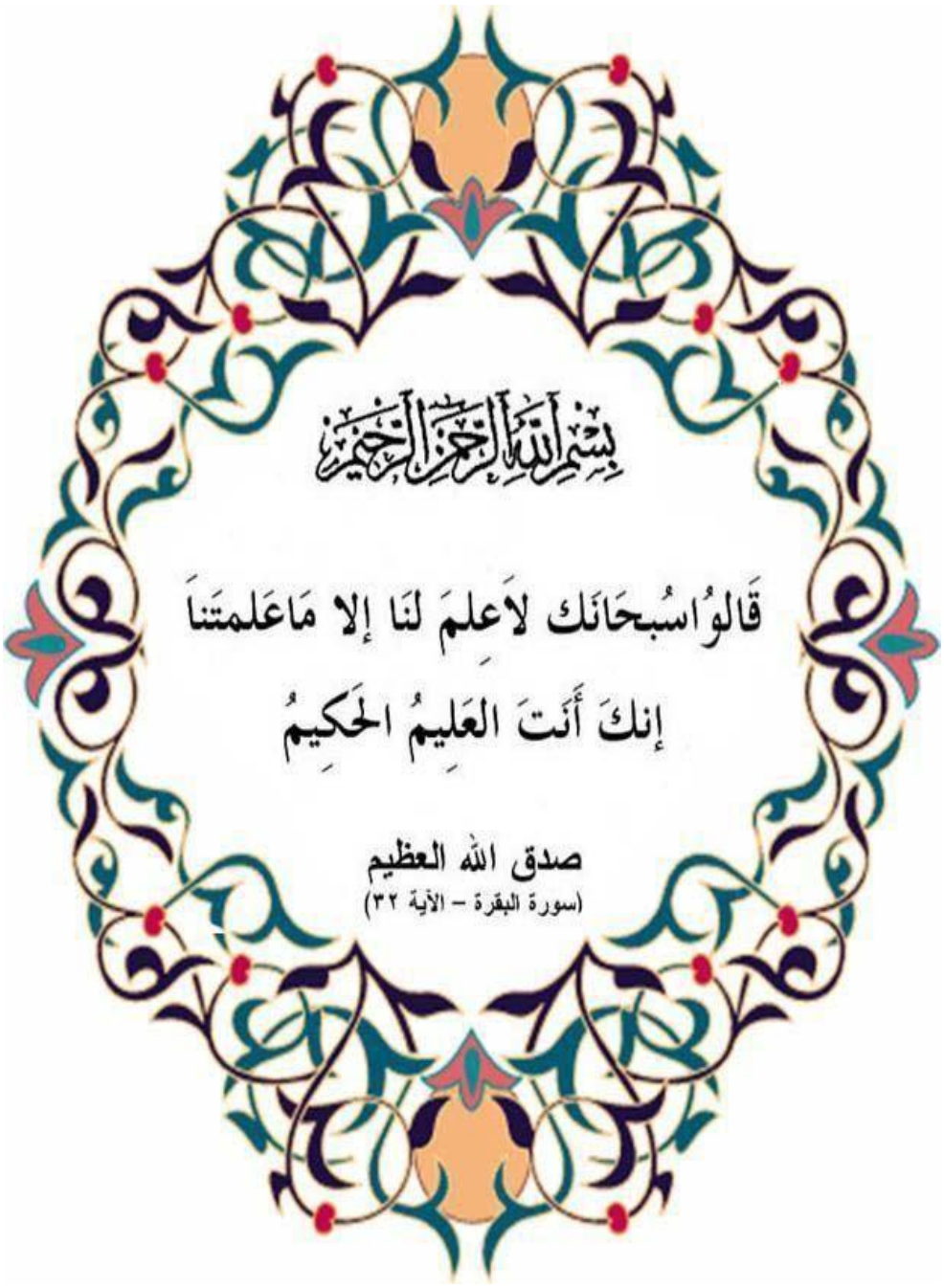
بسم الله الرحمن الرحيم
قَالوُاسُبحَانَك لاَعلمَ لنَا إلا مَاعَلمتَناَ
إنكَ أَنتَ العَلِيمُ الحَكِيمُ
صدق الله العظيم
(سورة البقرة – الآية ٣٢)

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Mohamed Abdullah Talkhan

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1.Introduction

Wound suction drains have been used to decrease the rate of postoperative hematoma formation and thus wound infections for many years throughout all surgical subspecialties. Although the use of surgical drains dates back to the years of Hippocrates, in the orthopedic literature these drains have not been shown to be beneficial in decreasing the rates of these complications, especially in orthopedic procedures including fracture fixation or arthroplasty surgeries. However, these drains are still commonly used throughout the orthopedic community, including spine surgery. Debate in this area remains, as proponents of its use in the immediate postoperative period believe that it will prevent fluid collection in the surgical dead space, and thus eliminates the media for bacterial growth. On the other hand, opponents believe that they are considered a foreign body that promotes inflammation and even sometimes provokes an infectious response. In spine surgery, the controversy is even more profound because it decreases the rare but devastating complication of postoperative epidural hematoma, but it may have a hypothetical increase in the risk of infection[(1)].

Postoperative hematoma in the operative field can increase tension on incisions, delay wound healing, and lead to wound infection. Moreover, epidural hematoma can lead to spinal cord compression and even paralysis in spine surgery. However, few studies have demonstrated that closed suction drainage has no benefit in the spine surgery. In contrast, closed suction drainage could cause retrograde infection, increase postoperative blood loss, and the need for transfusion. The use of closed suction drainage in spine surgeries remains controversial[(2)].

Epidural fibrosis is one of the major causes of recurrent pain after lumbar disc surgery. Various methods have been used for the prevention of significant fibrosis after surgery with variable success. It is generally believed that postoperative scar tissue results chiefly from organization of postoperative epidural hematomas. Because blood elements are responsible for fibrous tissue formation, meticulous hemostasis and avoidance of hematoma in the early postoperative period might be the easiest and primary step for decreasing significant late epidural scar, thus contributing to success of disc surgery. It has been observed that whereas some surgeons routinely insert a drain for lumbar disc surgery, the majority do not. The rationale for utilizing drains is to avoid accumulation of hemorrhagic collection in the epidural space after surgery[3,4].

Subfacial drains are routinely used after multi-level anterior cervical discectomy and fusion (ACDF) procedures. The use of these kinds of drains following multi-level ACDFs is motivated by a desire to reduce postoperative complications such as surgical site infections (SSIs) and the development of life-threatening hematomas that may cause airway obstruction[5].

In contrast, the use of drains also carries the risk for potential complications, such as iatrogenic trauma due to drain placement problems, removing difficulties of drain (which may require a second surgery), and excessive postoperative bleeding. Recent articles do not recommend routine drain use. they claim that drains do not reduce postoperative complications. Recently, a prospective study showed that sub-fascial drainage has no benefit over drainage for patients with adolescent idiopathic scoliosis (AIS). They found that the incidence of wound healing complications was low and identical for the “drain” and “no-drain” groups[6].