CEMENTLESS TOTAL HIP REPLACEMENT

An Essay

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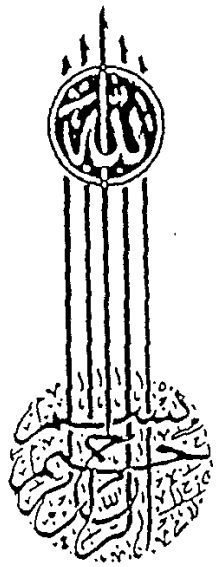

قَالُوا سُبْحَانَكَ لا عِلْمَ لَنَا إِلاَّ مَا
عَلَّمْتَنَا إِنَّكَ أَنتَ
الْعَلِيمُ الْحَكِيمُ

صدق الله العظيم
(سورة البقرة)
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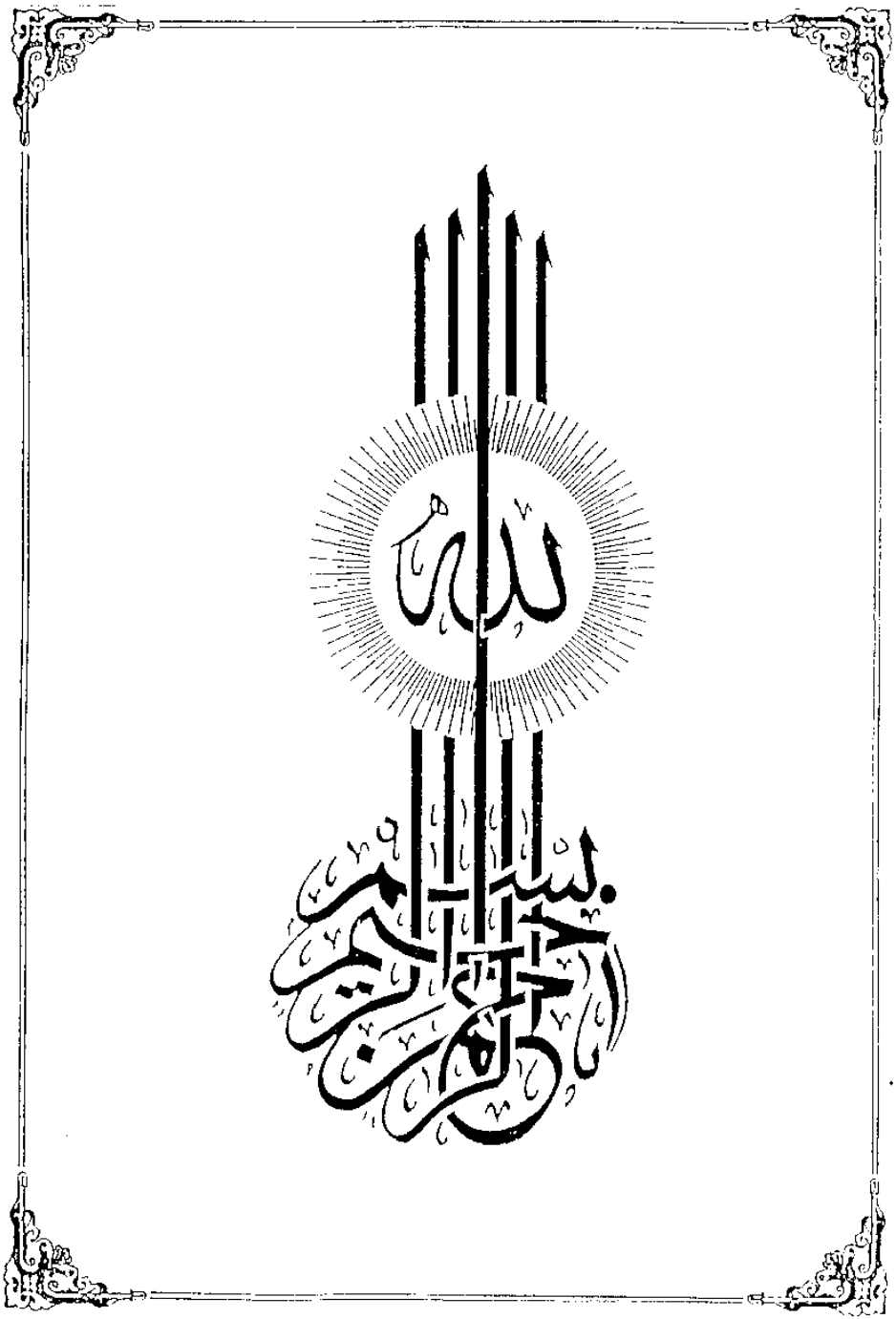

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INTRODUCTION

Total Hip Arthroplasty is the most common adult reconstructive hip procedure currently performed in the United States, and in many other countries. With increasing number of patients steadily and requiring surgical revision.

(Takuya et al. 1992)

The research continues to improve results, to relieve pain, to reduce disability and to correct deformity. Bourne et al. (1991) investigation has been proceeded along two paths, one to eliminate the use of cement and the other to improve the cemented hip, and an intermediate step-the bipolar prosthesis.

The bipolar cup concepts are now being used in primary as well as revision arthroplasty, especially in patients with acetabuler erosion.

(Takuya 1992)

Cementless total hip replacement has been introduced to achieve biological fixation, and there by, solves the problem of aseptic loosening of cemented prostheses.

(Callaghan et al. 1992)

Cementless fixation was expected to solve the late aseptic loosening problem of cemented prostheses, so, cementless (THA) have been used widely. The most common method of cementless implants fixation in the United States involves the use of porous metallic materials that allow the bone ingrowth.

Cementless porous-coated total hip prostheses were introduced recently in the hope of increasing the long term success rate of hip replacement in younger and more active patients, further implants design should aim to improve the initial stability of cementless femoral components under torsional load, this should improve the bony ingrowth chances

(Engh et al 1991)

Cementless replacement was developed as an alternative to the improved cemented implants design, because it is widely believed that (polymethyl-methacrylate) (PMMA) is the weak link in them.

(Bourne et. al. 1992)

The rate of loosening in cemented acetabular components increases with time, and it increase dramatically after 8 Years, which has lead to high number of relatively late failures of cemented actabular

components. However, when porous coated components have been used as an alternative, excellent bone ingrowth, has been demonstrated in hemispherical sockets transfixed with screw. Alternative methods of prosthetic fixation using cementless porous surfaced components were investigated at several centers.

At last, conclusion is "that cementless porous-coated femoral component can achieve durable biological fixation by bone ingrowth

(Garica et. al. 1992)

Recently it has been found that a unique symptom of thigh pain occurs more with cementless total hip arthroplasty (Bourne et al 1992).

The question remained, however, the improved cementing technique which has reduced the loosening incidence in the elderly would be effective in younger patients. or, it is better to direct all the attention to cementless (THR).

So, in this essay, we will try to answer this question & many other questions which appeared in the last decade.

Chapter I

Review of literature

Section (A)

Historical review