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A comparison between a mobility programme alone and a standard physiotherapy rehabilitation approach, on the functional outcome of patients following primary total hip arthroplasty.

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CHAPTER 1

INTRODUCTION

"Total hip arthroplasty (THA) is a highly successful surgical procedure in the treatment of arthritis of the hip." (Ganz et al, 2003). In the United States between the period of July 1995 to June 1996, a total of 61,568 patients underwent elective primary THA (Mahomed et al, 2003). In 2000/2001, according to the National Joint Replacement Registry, 15374 primary THA's were performed in Australia, representing an 8.3% increase from the previous year (Ackerman & Bennell, 2004). It is common practice that patients receive physiotherapy following this surgical procedure. The purpose of this is to ensure that they achieve certain functional goals prior to discharge from hospital.

The common approach to postoperative physiotherapy intervention following THA, consists of patient education, a set of bed exercises and daily mobilisation (Hall & Brody, 1999; Enloe et al, 1996). The benefits of using this approach have however not been shown, that is, whether bed exercises are in fact a necessary component, of the acute post-operative rehabilitation of THA patients. A randomised controlled study addressed this issue. This study was carried out by Jesudason & Stiller (2002), asked the question: "Are bed exercises necessary following hip arthroplasty?" The authors concluded that bed exercises did not add to the effectiveness of a mobility program, for patients following elective primary total hip arthroplasty during the initial post-operative period. This was in regard to three outcome measures: function, pain, and range of operated hip movement. It was therefore decided, to duplicate the above mentioned study, to investigate whether a similar conclusion would be found, here in South Africa.

In the tertiary provincial hospitals in South Africa, there is pressure on physiotherapists to prioritise which patients get treated, due to a shortage of staff and heavy patient loads. The researcher investigated further into the Johannesburg Hospital, Physiotherapy Department staff composition, and

found that in September 1995, 35 physiotherapists and five physiotherapy assistants were employed by the Physiotherapy Department. Ten years later, the same department employs 16 physiotherapists (PT's) and five physiotherapy assistants (PTA's). That is a 52.5% decrease in the number of physiotherapy staff (PT's and PTA's). (Johannesburg Hospital, Physiotherapy Department records.) This emphasises the staff shortage present, especially since the number of wards that need coverage and patient numbers, have not decreased accordingly, but have actually increased.

This is a problem not unique to Johannesburg Hospital. In the general orthopaedic wards at Johannesburg Hospital, and indeed most tertiary and secondary level hospitals in South Africa, there is a large turnover of trauma orthopaedic patients. This is due to the high incidence of motor/pedestrian vehicle accidents and high rate of interpersonal violence. THA patients, in comparison make up a smaller percentage of the patient load, but however take up considerable time resources of the treating physiotherapists. The reason for this may be that one is dealing with a much older subgroup of patients, who need more time and assistance to reach their functional goals. Also the rehabilitation of these patients has a considerable patient education component that the physiotherapist must effectively impart to the THA patient. This also takes up considerable time. In addition, the discharge of THA patients depends on these patients attaining specific milestones, which makes it essential that they get individualised treatment time from the physiotherapist, to ensure that these milestones are reached as soon as possible. If performing bed exercises does not improve the functional outcome of these patients', this time can be saved, and possibly better used on other components of their treatment, or with other patients. The physiotherapists working with the THA patients at Johannesburg Hospital have already started on a rehabilitative protocol that comprises of a mobility programme only.

<u>Problem Statement:</u>

The physiotherapists working with THA patients postoperatively, at the Johannesburg Hospital, have already embarked on a programme of mobilising only, due to the above discussed factors. With this altered approach, of not routinely doing bed exercises with THA patients, there appears to be no difference in the functional outcomes or length of stay in the hospital. Therefore this approach needs to be tested against the national and international consensus, which is currently a combined approach of performing exercises and mobilising of THA patients postoperatively.

Research Question:

Does a mobility regimen on its own, have the same functional outcome as a programme of bed exercises and mobilisation, in patients following primary total hip arthroplasty, at discharge from hospital?

Aim:

To establish whether there is a difference in functional outcome in patients following primary total hip arthroplasty, between those receiving a mobility programme alone as compared to bed exercises and a mobility programme, at discharge from hospital.

Objectives:

To measure and compare a control group (bed exercises plus mobility programme) and experimental group (mobility programme only) at discharge form hospital with regards to the following:

Primary objective:

- Functional status.

Secondary objectives:

- Severity of resting pain.
- Active range of hip flexion and abduction of the operated hip.