

EXPERIENTIAL ARTICLES

Total Hip Arthroplasty Rehabilitation in Cambodia

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ABSTRACT

Cambodia has recently seen the dawn of a new era in medical practice. Total hip replacement (THR) operations are now available for those who require these services. Post-operative rehabilitation is the crux of a successful hip replacement programme. In this article, the authors discuss their experiences in rehabilitating THR clients in Cambodia, and introduce what they think is the country's first specific protocol for rehabilitation of post-THR clients.

In 2007, the Children's Surgical Centre became one of the first providers to offer THRs in Cambodia. From the start, physiotherapists have provided post-operative rehabilitation but, to date, there has been no official protocol to address the specific challenges for THR rehabilitation in this part of the world. Multiple social and cultural factors mean that established protocols from the developed world are not wholly suited to the needs of Cambodian clients. Bearing in mind the lower literacy levels, poverty, language barriers, specific cultural and economic needs of the clients and the unique forms of transportation in Asia, the authors have developed a programme, including a guide with simple Khmer instructions, customised pictures, and a separate client education sheet.

The results seen among the THR clients seem promising -there is scope in the future to assess longer term outcomes of THR clients in Cambodia.

Key words: Total hip replacement, rehabilitation, physiotherapy, barriers, Cambodia, post-operative education.

INTRODUCTION

Rehabilitation and physiotherapy are emerging as key components of healthcare for surgical clients in Cambodia. Total hip replacements are now becoming

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available in third world countries (Kingori & Gakkuu, 2010), and the success of this procedure depends to a large extent on post-operative care. Cambodia and the developing world have unique populations and settings in which these arthroplasty operations are performed (Ingstad, 2001), and just as the procedure must be adapted from the West, so too must the rehabilitation. This article presents the authors' experiences with post-operative rehabilitation of total hip replacement clients at a charitable surgical centre in Cambodia.

Cambodia is a Southeast Asian country with a tragic modern history. The people of this region were for many years ruled by the French, before regaining their independence in 1953. The country was destabilised after the Vietnam War, and the rise of the Khmer Rouge, from 1975 until 1979, led to the genocide of over 1.5 million people. After the Khmer Rouge was overthrown, the country was reunited by 1993. Although it has made progress, the country still displays the effects of this era including civilian casualties of landmines and other disabilities, infectious diseases, and poverty (Encyclopaedia Britannica Online, 2013).

THR IN CAMBODIA

The Children's Surgical Centre (CSC) is a non-government organisation located in Cambodia's capital city of Phnom Penh. CSC was founded in 1998 by Dr. James Gollogly who, on an earlier assignment with the American Red Cross, had observed many people suffering from disability and landmine injuries in the country. The mission statement of the organisation is to provide free rehabilitation surgery to the people of Cambodia who are poor and have disabilities. In order to make this a sustainable mission, local surgeons and health workers are employed and trained. CSC has managed to demonstrate the ability to provide free and safe surgery whilst training local staff for a sustainable programme at a low cost (CSC, n.d.).

In 2007, CSC developed one of the first services to provide total hip replacement operations (THRs) in Cambodia. The operations are performed by the CSC team at a private practice facility nearby, where there is a more suitable theatre. Many of the implants used are purchased from India; however, donated hardware from America has occasionally been used. From November 2007 until October 2012, 116 operations were performed, mostly by local surgeons, but occasionally by visiting surgeons (Butler et al, 2011).

In Cambodia, limited treatment opportunities along with other issues such as poverty, reliance on traditional healers and grossly delayed presentation, give the

country a unique cohort of those who receive THRs. Many clients are younger than their Western counterparts, and higher numbers are seen with chronic dislocations, tuberculosis arthritis, and pathological fractures (Collins, 2000).

Since the initiation of THRs at CSC, clients have been provided with a good level of post-operative rehabilitation. Three full-time, locally trained physiotherapists have been teaching exercises to clients, educating them about hip precautions and mobilising them. There is a rehabilitation facility on site, as well as a new offsite location for longer term rehabilitation, and devices such as Zimmer walking frames and crutches are readily available. Post-operatively, most clients stay for about 1 to 2 weeks and are then followed-up at regular intervals. Clients' outcomes are recorded into a joint registry database, similar to National Joint Registries in other parts of the world (Graves et al, 2004).

The physiotherapists promote the principles practised in developed countries, such as early mobilisation. They collaborate in decision-making, and are capable of providing high quality rehabilitation services. They have even shown ingenuity in devising plans for clients, in keeping with the local lifestyles.

Having been unable to find any published research about rehabilitating post-op THR clients in Cambodia or any other resource-poor nation, and being unaware of any protocols to standardise this aspect of their treatment, the authors have devised a customised set of guidelines with the aim of providing clients with a high-quality, standardised rehabilitation programme which is congruent with the needs of Cambodian culture and lifestyle.

A multidisciplinary meeting took place to discuss how to proceed. Guidelines from hospitals in other countries were studied and challenges for implementing these were identified. These challenges include low education and literacy, poor resources in the community, frequent loss to follow-up, and a limited understanding of the disease by clients. In this setting, it is essential to not only take into consideration the cultural and lifestyle problems that Cambodian clients may face after a hip replacement procedure, but to also offer real and practical alternatives.

Two documents were created. The first document is a protocol for the physiotherapist to follow and provides instructions, details an exercise regimen, and outlines precautions to advise the client. English is a second language for the physiotherapists, so the document is written in clear and simple terms, and contains animated diagrams of each exercise and precaution to ensure correct understanding.

The second document is a client information sheet. It provides instructions to the clients on the precautions to be taken post-operatively and advises them to follow their exercise programme. Simple Khmer (the language of Cambodia) phrases are used, with a large font and customised animations. This approach was designed specifically for the clients at CSC, who often have lower literacy levels.

Many Cambodians use motorcycles (“motos”) for transportation, and it is not uncommon to find 3 or more riders sharing one small bike. Driving a “moto” poses a problem for the stability of the driver’s prosthesis as he must adduct, internally rotate, and flex the hip. For a passenger the ride can be very bumpy and requires a good deal of strength, so great caution must be taken especially during the early stage of the rehabilitation process. “Moto” passengers may ride “side-saddle”, with both legs draped over the same side of the bike, as opposed to straddling the seat. A popular alternative to the “moto” is the “tuk-tuk” which is essentially a passenger cart towed behind a motorcycle, and is named for the distinctive sound of its engine. As driving a “moto” can often be hazardous, especially in the early rehabilitation phase, clients are advised to travel only by “tuk-tuk” for the first 3 months.

Women in Cambodia often adopt a unique style of sitting on the floor, which is commonly seen at the pagodas or temples. The buttocks rest on the ground, with the knees bent and pointing forward, but both feet are placed to the same side of the seated person’s body. A deep squatting position is also assumed when work is done at floor level, such as when doing dishes or preparing food. A similar squatting position is assumed when clients use a traditional style toilet. These positions could cause the client to suffer a dislocated hip. Practical solutions to these issues, most of which had already been devised by the physiotherapists, were drawn for guidance. Suitable sitting positions were described, along with a makeshift alternative system for using the toilet with an improvised bamboo support frame.

Further, the furniture traditionally associated with Western culture is not found in Cambodian villages and homes; therefore, standard advice given to Western clients, such as not to lean forward in chairs, is not applicable to this population. Clients often use hammocks and low-lying benches, rather than chairs. The client information sheet portrays a more realistic diagram for guidance.

CONCLUSION

In recent years Cambodia has seen the dawn of a new era in medical practice. Surgery is becoming more common, more advanced, and more accessible. However, for successful results, surgical programmes like the one provided by CSC must include more than just operations. Rehabilitation is known to be a central and necessary aspect in hip replacement surgery (Siggeirsdottir et al, 2005). Compared to developed nations, developing countries as a whole see different presentations, have lower levels of education and understanding of disease, and reduced access to resources. The Cambodian lifestyle is itself unique when compared to developing countries in other parts of the world. Though many protocols are available from the western world, the authors of this article have been unable to find similar documents from developing countries which address these differences. For this reason, they have developed what is believed to be Cambodia's first customised guideline for rehabilitation following total hip replacement surgery.

The results seen among the THR clients seem promising -there is scope in the future to assess longer term outcomes of THR clients in Cambodia. In the coming years it will be important for the team at the Children's Surgical Centre to maintain its hip replacement registry and strive to minimise loss to follow-up. The data collected should be periodically evaluated to look for both positive and adverse events. The rehabilitation protocol which has been developed should be modified when issues arise, or when new and applicable evidence becomes available. For developing nations in general, the rehabilitation process should be delivered at the same high-quality level as in developed countries, even as it is tailored to fit the needs of that particular society.

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