

## Assessment of Patients' Knowledge Toward Total Hip Replacement Home – Care

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### Abstract

To assess the total hip replacement patients' knowledge of home – care regarding pain management, medication therapy, wound care, mobility limitation and complications may occur in the post hip replacement surgery, and to assess relationship between some variables such as, age level of education, sex & marital status with home- care knowledge. A descriptive study was used to assess the hip-replacement patient home-knowledge, a purposive sampling of (60) hip-replaced –patients were selected from Gazy Alhariri Hospital ( central of surgical profession ) and Alwasity Hospital ( plastic surgery ) , the questionnaire obtains two parts , part one, which included socio-demographical characteristics of the sample and part 2 , which included hip-replacement home-care knowledge , reliability and validity of the questionnaire were determined . Data were collected through the use of the questionnaire, at the hip application of the interview techniques and review of the hip replacement surgery rehabilitation review literature. Data were analyzed through descriptive and inferential data approach. The result of the study presented that the majority of the study sample were group at age (25-35) years old, female married, housewife with (50%) of patients were at level of primary school education. They were lacking knowledge toward pain management at home and wound care , also discharged with very minimum information and rehabilitation training instruction toward practicing assistive walking and activity device or preventing potential complication such as infection and dislocation , Besides the study revealed a significant relationship between total- hip replacement knowledge toward complication may be occurred and level of education ,which revealed that the educated hip- replaced patients can managing and preventing the complication may occurred better than those not educated. Establishing a special rehabilitation unit in the ward to provide the patients with a rehabilitation program for training , also to provide them with a booklet or pamphlet illustrating all formations the patient may need at home.

**Key words:** Total – hip replacement , patients' knowledge of pain , patients'-knowledge of potential complication , patients' knowledge toward wound , patients' knowledge of mobility.

### تقويم معرفة المرضى للعناية المنزلية بعد عملية استبدال مفصل الورك

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### الخلاصة

تقييم معلومات المرضى للعناية المنزلية بعد عملية استبدال مفصل الورك الكامل ، فيما يتعلق بالعناية بالألم والعلاج الدوائي والعناية بجرح العملية وتحديدات الحركة و المضاعفات التي تحدث بعد العملية ، وكذلك تقييم العلاقة بين بعض المتغيرات مثل العمر والمستوى الثقافي والجنس بمعلومات المريض للعناية المنزلية . دراسة وصفية غير احتمالية لتقييم معلومات مرضى استبدال مفصل الورك بالعناية المنزلية وشملت العينة (60) مريض تم إجراء عملية استبدال مفصل الورك لهم في مستشفى الشهيد غازي الحريري المركزي للجراحات التخصصية ومستشفى الواسطي للجراحات التجميلية ، وتتضمن اداة الاستبيان من جزئين: الجزء الأول: المعلومات الديموغرافية للعينة.

الجزء الثاني: معلومات مرضى استبدال مفصل الورك الكامل للعناية المنزلية. وتم تحديد صدق الأداة وجمع البيانات خلال استمارة استبيان عن طريق المقابلة المباشرة من قبل الباحث وكذلك مراجعة بعض الأدبيات التي تخص عمليات استبدال مفصل الورك وتأهيله، وتم تحليل البيانات من خلال الإحصاء التحليلي والاستدلال . أظهرت الدراسة أن معظم المرضى المشاركين في العينة هم من المجموعة العمرية 25-35 سنة، نساء متزوجات وربات بيوت . وان (50%) من المرضى كان مستواهم الثقافي هو الدراسة الابتدائية فقط ، أظهرت الدراسة أيضا هنالك نقص في معلومات المرضى نحو العناية عند حدوث الألم في المنزل وكذلك العناية بالجرح، ويتم خروج المريض من المستشفى بمعلومات قليلة جدا تأهله لممارسه المشي وإرشادات استعمال مساند الحركة ومنع حدوث مضاعفات خطيرة كالالتهابات وعدم تموضع المفصل في مكانه، وكذلك أظهرت الدراسة علاقة قوية بين المستوى الثقافي للمريض ومنع حدوث مضاعفات لمرضى استبدال مفصل الورك الكامل. أوصى الباحثون انشاء وحدة تأهيلية متخصصة في نفس الردهة لتوفير برنامج تأهيلي للمريض للتدريب على ممارسه النشاطات والفعاليات اليومية التي يحتاجها المريض في المنزل وكذلك توفير كتيب يتضمن كل النشاطات و المعلومات الخاصة التي تتعلق بالتمارين الحركية ليكون دليل عمل له عند الخروج .

الكلمات المفتاحية : تبديل كامل المفصل ، معرفة المريض بالألم ، معرفة المريض لمضاعفات المرض الدقيقة ، معرفة المريض بالجرح، معرفة المريض بالحركة .

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Received : 9/8/2011

Accepted : 21/2/2012

## Introduction

Total- hip replacement provides significant relief of pain and improvement of function, it is the replacement of severely damaged hip with an artificial joint, indication for this surgery include arthritis, femoral neck fracture , expulsive trauma and problem resulting from congenital –hip disease<sup>(1 - 15 )</sup> . Hip replacement, have been an offer to patients with painful hip-joints for almost 50 years, millions of patients worldwide have benefited from this surgery and regained pain free, active lives <sup>(6,14)</sup> Home as health setting, optimal management in the home occurs when a person can independently maintain a growth – promoting environment, the home is comfortable and safe, and a person perform self-care and hygiene tasks, interacts with others and engages in activities <sup>(9)</sup>.With maintaining femoral head component in acetabular cup <sup>(2)</sup>.Rehabilitation program and precautions necessary to protect newly implanted hip and to prevent problem called dislocation, these instructions and precautions given as sessions after surgery related to how to use a walker in walking and keeping a good alignment and balance in a usual time 2-4 weeks with cane and 4-6 weeks unassisted <sup>(2,12)</sup>.Home care considerations include ongoing assessment of management , maintaining for infection , and prevention of deep vein thrombosis (DVT). not all patients will qualify for home nursing visit, the incision may be closed with metal staples ,which are removed at the surgeon's clinic, because of the high risk of DVT, prothrombin times will be determined weekly are commonly used to map the care of clients after total hip replacement because of the consistent postoperative needs of these population <sup>(4,8)</sup>. Infection of all the surgical complication , is then most difficult to address .It can get into the hip joint by a variety of means ,may be transferred in top blood from skin at the time of operation or by the patients circulation (blood born contamination) , so in order to prevent infection the patient should takes a certain precautions, such as intra venous antibiotics <sup>(7)</sup> , an operations will be required to put things right , or may hip-joint opened and irrigated to remove infection after 6-weeks.Outpatient physiotherapy treatment is tailored to patients need and speed recovery , usually about 6 - 7 physiotherapy sessions will be arranged over on 8 weeks period in participating walking on a regular basis and build-up a strength thigh and hip muscles<sup>(9)</sup>.

## Methodology

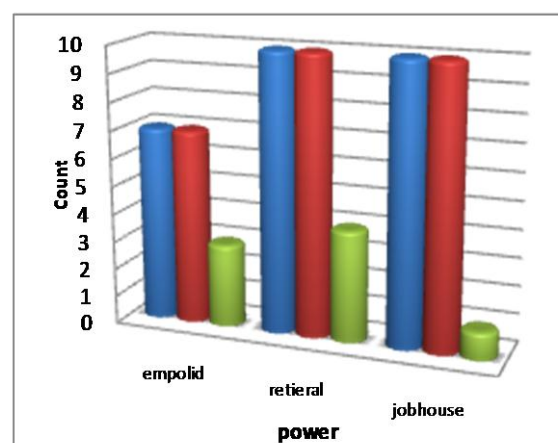
A descriptive design study was carried out to assess the patients knowledge

toward hip replacement home-care knowledge A purposive (non- probability) sampling of 60 patients on discharged from Alhariri hospital and Alwasity hospital A questionnaire, interview form was designed by investigator to measure the variables underlying the present study, which is consisted of two part: \*. Part one: demographical sheet, consisted of 6 items; as following Age, gender, employment, marital status, level of education, and appliance aids used by patient.

- Part two: is composed of 4 sections, which are knowledge section to present the patients home care knowledge.
- First section: patient knowledge of pain management at home, which consisted of 5 items, scored as 3 for always, 2 for sometimes and 1 for never.
- Second section, wound care patient knowledge which consisted of 5 items, scored as 3 for always, 2 for sometimes and 1 for never.
- Third section: Patients' knowledge in mobility limitation and also scored 3, 2, 1 consisted of 8 items.
- Forth section: patients' knowledge regarding potential complication, consisted of 4 items and also scored 3, 2, 1 for always, sometimes, and never respectively with 2 as cutting of point.

Data was collected by the researchers through the use of the designed questionnaire interview technique to patients on discharge the data collection was carried out from 1/October /2010 to 1/July/2011.The researcher took a long time to collect the data due to the rare cases and the surgery take place once a week.The validity of the questionnaire was determined for clarity, relevancy and adequacy.

## Results



Distribution of the sample according to the occupation.

**Table 1: Demographical characteristics of the sample.**

Item		F	%
Age	25-35	20	33.3
	35-45	13	21.7
	46-55	6	10
	56-65	15	25
	66 - or above	6	10
Total		60	100
Gender	Male	28	46.7
	Female	32	53.3
Total		60	100
Job	-employed	20	33.3
	-retired	12	20
	-housewife	28	46.7
Total		60	100
Marital status	-Married	48	80
	-single	2	3.3
	-Widowed	10	16.7
Total		60	100
Level of education	-primary school	30	50
	-secondary school	20	33.3
	-college	10	16.7
Total		60	100

F = frequency.

This table indicated that the majority of the sample 33.3% were of (25.35) years age and employed, 80% of them married, the level of education was primary school is 50% .

**Table 2: Distribution of patients' knowledge of pain management at home**

No.	Item	Always	Sometimes	Never	MS*
<b>Methods to reduce pain</b>					
1	Taking bed-rest and maintaining alignment on-pain experience at operative site	40	20	0	2.6
2	Practicing destruction and relaxation technique periodically	16	35	9	2.9
3	Administrating medication when experience pain by care giver.	10	48	2	2.6
4	Identify the action and doses of medication non-steroidal, anti-inflammatory and opioid drugs.	2	18	40	1.9
5	Recognizing medication side-effect such as nausea, vomiting ,and constipation	12	18	30	2.3

\*MS: main score

This table showed the highest main score ( 2.9) on relaxation technique periodically and lowest main score ( 1.9) to identify the action and dose of medication that indicates lacking of knowledge related to treatment.

**Table 3 : Distribution of patients' knowledge toward wound management at home.**

No.	Item	Always	Sometimes	Never	MS
1	Keeping a wound incision clean and dry , until staple removed	30	10	20	2.16
2	Changing wound dressing in a sterile technique	14	6	30	1.5
3	Recognizing wound infection signs such as (redness, swelling, and drainage from incision)	6	16	38	1.5
4	Fellow-up that wound suture is removed in fourteen days in out-patient clinic	22	26	12	2.2
5	Taking antibiotic in time to avoid infection	28	3	0	3.8

This table showed highest main of score( 3.8) toward taking antibiotic in time while lowest main of score (1.5) to item recognizing wound infection .

**Table 4: Patients' knowledge of mobility-limitation.**

No.	Item	Always	Sometimes	Never	MS
1	Demonstrate safe use of assistive devices crutches ,walker ,and wheel chair	16	8	34	1.3
2	Demonstrate, how to stand without flexing leg actually	22	24	16	3.2
3	Recognizing the weight bearing limits especially on praying	30	12	18	2.2
4	Recognizing avoidance of low seated chair and crossing legs in sitting	20	28	12	2.1
5	Sleeping with abduction pillow , between legs to maintain alignment	18	28	14	2.9
6	Participating in gradual activities and prescribed exercise regimen	10	34	18	1.9
7	Accepting assistance in ADL,(clothing, bathing himself)	10	10	36	1.9
8	Demonstrating how to change position frequently	10	24	26	1.7

This table showed highest main of score( 2.9) in sleeping with abduction below between the legs while lowest main of score(1.3) to item demonstrating safe use of assistive devices crutches, walker and wheelchair.

**Table 5 : Distribution of patients' knowledge toward mobility limitation according to some demographical characteristics.**

No.	AGE	Always	Sometimes	Never	total	X2	* DF	Sig.
1	30-34	11	7	5	23	14.354	12	0.278
2	35-40	2	3	2	7			
3	41-45	1	3	3	7			
4	46-50	2	4	-	6			
5	51-55	1	3	2	6			
6	56-60 &above	1	3	7	11			
	Total	18	23	19	60			

\*D.F=degree of freedom

This table indicated no significant relation between age group and patient knowledge at home toward activity and mobility limitation .

**Table 6 : Patients' knowledge of potential complication- at home.**

No.	Item	Always	Sometimes	Never	MS
1	Identifies dislocation prosthesis signs; increase in pain, shortening of leg, inability to move leg. Feeling of popping sensation in operative hip's site.	6	6	48	1.6
2	Identifies deep-vein thrombosis signs; swelling calf pain.	0	10	50	1.2
3	Identifies wound infection signs ,swelling ,pain, fever, purulent drainage from the wound incision	12	16	32	1.6

This table showed low main of score (1.6) to potential complication which indicating lacking of knowledge and information related to management of complication at home.

**Table 7: The relation between the patients' knowledge of complication after hip-replacement at home and level of education .**

No.	Item	Always	Sometimes	Never	total	X2	DF	Sig.
1	Primary school	7	13	9	29	2.75	4	S
2	Secondary school	6	5	3	14	2.74	4	S
3	college	5	5	7	17	-	1	S
	Total	18	23	19	60	0.001		S

This table reveals significant relation between level of education and patients' knowledge toward complication may occur after total hip-replacement at home , which indicating hip- replaced educated patients able to manage the complication that may occur

## Discussion

The current study showed that , the majority of the study sample were at age of 25-35 year,(table-1), this finding is not compatible with( Smeltzer & Bare) <sup>(1)</sup>who stated that total hip- replacement patients usually 60 years of age or older, and has unremitting pain or irreversibly damage hip joint . Also the table revealed that 53.3% of the Sample were female,46.7% they were housewife , married 80%,and 50% with primary level of education . Concerning the patient-knowledge toward pain management at home, (table -2) the result of the study showed high mean score (2.9). Toward practicing destruction and relaxation technique periodically and (2.6) on taking bed-rest and maintaining alignment on experience pain, while low mean of score (1.9), identifying the action of a serious medication taken.These findings indicating a lack of knowledge of hip-replaced patients in managing pain at home, and also revealed that no discharge instruction was provided to them. It was stated that among patients undergoing hip replacement procedure ,pain is one of the five most undesirable complication .Unrelieved pain can adversely affect the individual's ability to perform basic daily activities as well as increase of stay and rehabilitation<sup>(2 ,3)</sup>.One of the most important aspect to prevent postoperative infection is the knowledge of wound-care at home, (table-3) showed highest mian of score (3.8) on taking antibiotics in time, While lowest mian of score (1.5) for two serious item ,first for recognizing wound infection signs, second on changing dressing in a sterile technique , which also indicating lack of discharge knowledge and information given to patients at hospital.This result supported by( White) <sup>(7,13)</sup>, following a Total Hip Replacement, the client is at increased risk for joint infection that may lead to the development of osteomyelitis, also stated, the client will remain free from wound infection, as evidenced by normal temperature and white blood cells count (WBC), absence of purulent drainage from the wound and absence of redness or inflammation at the surgical site.Practicing walking at home is the important aspect for hip-replacement patients as shown in (table - 4) which indicating highest mean of score (3.2) to item of demonstrating, how to stand without flexing leg acutely, while lowest mean of score (1.3) to item of demonstrating safe use of assistive devices crutches, walkers and wheels chairs, this result revealed, that hip replacement patient discharged from hospital without any training programs or practicing the assistive devices provided to them for safety activity at

home. This result supported by( Micheals) <sup>(5, 11 .15)</sup> who presented that many assistive devices have been developed to make activities easier and less stressful for joints and muscles, these devices will be helpful at home or work. Also stated ( 6-7) physiotherapy sessions will be arranged over an 8 weeks period, the most important to do ,is how to walk on a regular basis and build up the strength in thigh and hip muscles , how to keep legs and knees apart, and avoid exercise flexion at the hip joint .The list of complication following total hip replacement was extensive ( table - 6) showed that all mean of score for the three items of complication ,was(1.6)and(1.2) which indicating poor information and instruction were given related to complication may occurred at home ,that may keep them to be at high risk for these complication <sup>(8,10)</sup> supporting this result, who stated that home care consideration include ongoing assessment of pain management ,monitoring for infection and prevention of deep vein thrombosis. The patient should be instructed to obtain prophylactic antibiotics prior to any surgical procedures .No significant relation between the sample age group and patients knowledge toward mobility limitation at home (table 5) ,while significant relation between level of education and patients knowledge toward managing complication at home, which revealed that hip replacement educated patients can managing the complication at home (table7).

## Conclusion

The study presents that the majority of the sample were lacking knowledge related to pain management at home and wound care, also discharged with very minimum information and rehabilitation training instruction toward practicing assistive walking device and preventing potential complication such as infection and dislocation.

## Recommendation

1. Establishing a special rehabilitation unit at the ward to provide a Program of training on assistive device instructed to patient apply to them before discharge to prevent complication of dislocation which is a very serious one.
2. Provide the discharge patient with a pan phlet6 of all need instruction with figures illustrating to them all information they may need at home relating to activity and sleeping or medication

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