Functional Performance For Patients Post Heart's Valves Replacement at Cardiac Surgery Centers in Baghdad City

الأداء الوظيفي للمرضى بعد استبدال صمامات القلب في مراكزجراحة القلب في مدينة بغداد

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الخلاصه :

الهدف : أجريت الدراسه لتقيم ألاداء الوظيفي للمرضى بعد تبديل الصمامات القلبيه ولأيجاد العلاقه بين ألاداء الوظيفي والمعلومات الديموغرافيه والمعلومات الطبية.

المنهجية: اجريت دراسه وصفيه في مراكز جراحة القلب في مدينة بغداد (مركز ابن البيطار التخصصي لجراحه القلب ومركز العراق التخصصي لأمراض القلب)وللمدة من ٢٨ كانون الاول ٢٠١٣ لغاية ١ ايلول ٢٠١٤حيث اختيرت عينه غير احتماليه (غرضيه) من ٥٠ مريض بالغ يراجعون مراكز جراحة القلب في مدينة بغداد تم تبديل الصمام القلبي لهم،جمعت البيانات من خلال استبانه مكونه من ثلاثة اجزاء (بيانات ديموغرافيه ،وبيانات طبيه ،مقياس الاداء الوظيفي)بعد ثبوتها ،حيث حددت المصداقيه من خلال ١٥ خبير والثبوتيه من خلال دراسه مصغرة حيث حللت البيانات احصائيا وصفيا من خلال تطبيق الأجراءات الوصفيه والأستنتاجيه.

النتائج : اظهرت نتائج الدراسه بأن مستوى ألأداء الوظيفي للمرضى (٨٠%)متوسط و(٢٠%) منخفض وان معظم عينة الدراسه (٩٢%)هم منتظمون في تناول علاج مانع التخثر ومعظم العينه(٩٢%) تم تبديل لهم صمام ميكانيكي وأظهرت الدراسة علاقه معنوية بين ألاداء الوظيفي للمرضى وبين العمر *p=0.042و مستوى التعليم **p=0.008والحالة الاقتصاديه* *p=0.004وقوة ضخ القلب *p=0.044واللتزام بلمتابعه للمريض*p=0.042 والتزام بأخذ العلاج بصورة منتظمه *p=0.004والصمام الميكانيكي*p=0.05 وللمده بعد العمليه*p=0.044

التوصيات :أوصت الدراسه باستخدام لصمام النسيجي بدلاً من الميكانيكي لمرضى كبار السن لتقليل المضاعفات الناتجة من استخدام ادويه مانعة التخثروتحسين المعيشة بعد العملية،ستشاريه نفسيه تساعد المرضى على التغلب على المشاكل النفسية والاجتماعية الناتجة من العملية،تصميم برنامج تثقيفي للمرضى لغرض زيادةعناية لمريض لنفسة وزيادة القناعة بالعناية العلاجية ،استخدام برامج تثقيفية وتدريبية للملاكات التمريضية لتحسين الخبرة والمعرفةلديهم للعب دور اكبرفي الخدمة العلاجيه المقدمة للمريض ومنع اصابة لصمام بلعدوى الانتقالية

الكلمات المفتاحية : الاداء الوظيفي ، صمامات القلب، المرضى

Abstract

Objectives: The study is carried out to assess functional performance for heart's valve replacement patients and find out relationship with sociodemographic data and clinical data

Methodology: Descriptive design is carried out at cardiac surgery centers in Baghdad ; Ibn -Al Betar Specialized for cardiac surgery center and Al-Iraqi center for cardiac disease. its initiation from December[28the] 2013 to September [1st] 2014,A non- probability (purposive) sample of 50 adults patients are attended cardiac surgery centers at Baghdad city and who have heart valves replacement. The data collection through development of questionnaire which is composed from three parts(socio demographic data, clinical information, functional performance) after validity and reliability , validity has been determined through (15) experts and reliability has been determined through pilot study, The data are descriptive statistical and analysis through application of descriptive and inferential statistical methods.

Results: The result of the study has revealed that level of Functional Performance for the patients post heart's valve replacement were (%٨٠)moderate and (%٢٠)low majority of the study samples (%٩٢)have regular up take of the anticoagulation drugs and majority of the samples(%٩٢) have mechanical valve implementation ,The results of the study represent a significant statistical correlation between the level of Functional Performance for patients post heart's valve replacement group and the age p=0.042* , level education p=0.008*, socio economic status p=0.004*, ejection fraction p=0.044* ,follow up of the patients p=0.042* , regular up take of the anticoagulation drugs p=0.004*, mechanical valve used p=0.05*, duration post operation p=0.044*

Recommendations : The study recommended to using biologic valve (tissue valve) for elderly patient instead mechanical valve when valve replacement to reduce complication anticoagulation drugs and enhance survival post operation, establishing Psychological consultation to copy the patients with emotional and social impact which results from the operation, an education program should be designed to increase patients education about self-care and increase satisfaction with care ,use education and training programs (regular lectures for nursing staff) to improving the expertise and knowledge of nurses to play an essential role in fostering patients care and prevent valve infection.

Key Word:- Functional Performance, Heart's valve Replacement , Patients

Introduction:

Valve replacement is the surgical intervention for patient with sever valvular heart disease to replace indicator valve with prosthesis valve (mechanical or biological) or with homografts valve. This an operation that is performed when valvuloplasty is not appropriate (e.g. ,when the valve is regurgitation is a condition when valves do not close completely and blood flows backward through the valve or Stenosis is a pathological narrowing square area of valve less than normal area due to leaflets thickening or fibrotic change in the valve that make it don't open completely result impede of blood flow from through chambers the heart[(1),]The valve replacement or repair surgery remain the treatment of choice for valve disease[(2)].

The following factors have been increased risk of surgery: older age, associated co morbidities, female gender, emergency operation, left-ventricular dysfunction, pulmonary hypertension, coexisting coronary disease, and redo-intervention [(3)], Many complications Postoperative of valve replacement that threatens a life and low functional performance and survived of patient such as Complications The Valve Post Replacement it which consist of Four categories of type that are Thrombosis, Prosthetic Valve Infective Endocarditis, Structural Valve Dysfunction and Nonstructural Dysfunction[.(4),]Cardiac complication which including early complication (Cardiac rhythm disturbances , Bleeding, Neurologic complications, Impaired cardiac output, Wound infection, Pulmonary Complications, Gastrointestinal Complications, Postoperative Cardiac Tamponade) and late complication (Endocarditis, Sternal problems, Peripheral nerve injuries, Left ventricular failure, Right ventricular failure and tricuspid regurgitation)and at last Complications - Cardiopulmonary Bypass[(11)] .Functional performance is a person's ability to perform a function and daily activity ,the nurse observes the patient performing specific activities and notes the degree of independence; the time taken; the patient's mobility. The nurse also carefully assesses joint motion, cardiovascular reserve, and neurologic function, because functional ability depends on these factors as well. Observations are recorded on a functional assessment tool. These tools provide a way to standardize assessment parameters and include a scale or score against which improvements may be measured.[(5)]

Methodology:

Descriptive study is perform at surgical &medical consultancy and cardiac ward pre operative at following cardiac surgery center in Baghdad (Ibn -Al Betar Specialized for cardiac surgery center and Al-Iraqi center for cardiac disease) . This study was initiated from December[28the] 2013 to September[1st] 2014, a non- probability (purposive) sample of 50 adult patients who have heart valve replacement only without another operation within valve replacement a have been were attending cardiac surgery centers at Baghdad city. The data collection through development of questionnaire which is composed from three parts(socio demographic data, clinical information, functional performance) ,validity has been determined through (15) experts and reliability has been determined through pilot study which carried out on twenty patients (10 patients with hearts valve replacement according to the same criteria , they were attending to Ibn –Albetar specialized Cardiac surgery centers.

Reliability of the questionnaire:

The reliability of the questionnaire is done throughout the used test –retest method patient response which was R=0.851

Table 1: It presents The Reliability Of The Questionnaire

Source	Mean	SD	R.C
Test	1.085	10.71	0.851*
Retest	1.067	11.92	

* correlation is significant at the 0.01 level (2-tailed)

Method of Data Collection:

Data collection period was taken from April 25th to July 6th 2014 The data collected by using two methods which include:-

1-Answer the questionnaire chart by the patient himself which is concerned with demographic data and functional performance scale.

2-Report by myself and structured interview technique used for patient cannot read and write and took some of the data from of chart patient in the cardiac centers such as ejection fraction the heart , operation time(cross clamp time),specific diagnosis of valve problem and degree of impairment .

Rating and scoring:

The score system is applied through giving (1) for the never, (2) for sometimes and (3) for the always answers for each of the domains. Then the score marks are categorized into three level low ,moderate ,high

rating scale was format according lukerd scale as the following[12]

$$= \frac{cut\ of\ point}{no.of\ scale} \times 100$$

$$= \frac{2}{3} \times 100 = 66.6$$

So interval had ranged between (66.6-100) that represented the rate of functional performance effects:

$$= \frac{100-66.6}{2} = 16.7$$

66.6+ 16.7= 83.3

(66.6-83.3) is moderate functional

(84- 100) is high functional performance

In addition less than 66.6 is low functional performance .The data are descriptive statistical and analysis through application of descriptive and inferential statistical methods.

Results:

Table (2) : Distribution of The Patients Post Heart's Valve Replacement by Socio- Demographic Characteristics

1-Sociodemographic data		patients post heart's valve replacement	
		F	%
1. Age (years)	<40	11	22.0
	40---49	18	36.0
	50---59	10	20.0
	60---69	9	18.0
	=>70years	2	4.0
	Mean±SD (Range)	48.7±10.8 (29-70)	
2. Sex	Male	23	46.0
	Female	27	54.0
	Total	50	100%
3. Marital status	Single	6	12.0
	Married	34	68.0
	Widowed	7	14.0
	Divorce	3	6.0
4. Level of education	Illiterate	9	18.0
	Read & Write	8	16.0
	Primary graduate	10	20.0
	Intermediate graduate	7	14.0
	Secondary graduate	7	14.0
	Diploma	4	8.0
	University	4	8.0
	Higher education	1	2.0

Continue……

Table (2) to be continued

		F	%
5. Employment	**Employed**	**15**	**30.0**
	Business man	**7**	**14.0**
	Retired	**8**	**16.0**
	Housewife	**16**	**32.0**
	Not working	**4**	**8.0**
6. Residency	**Urban**	**37**	**74.0**
	Rural	**13**	**26.0**
7. Socio-economic status	**Low**	**18**	**36.0**
	Moderate	**20**	**40.0**
	High	**12**	**24.0**

F: frequency %: percentage

Table(2) ؛Presents the demographic characteristics of (50) patients post heart's valve replacement indicated that the highest percentage of the patients post heart's valve replacement group were female (54.0%) most of them**(36.0**) were (40-49)years old and(68%) married, house wife , the higher percentage of the sample were (**20.0%)** were primary graduate ,(74%)were addressed in the Urban ,In represent to the Socio-economic status the highest percentage of the patients were moderate

Table (3) : Distribution of The Patients Post Heart's Valve Replacement by Clinical Information

2. Clinical information	**Patients Post Heart's Valve Replacement**		
		F	**%**
1. Smoking	**Yes**	**3**	**6.0**
	No	**37**	**74.0**
	Leave smoking	**10**	**20.0**
2. Duration of smoking	**<10**	**4**	**30.8**
	10---19	**4**	**30.8**
	=>20years	**5**	**38.5**
	Mean±SD(Range)	**16.8±9.0(4-33)**	
3. Alcohol	**Yes**	**-**	**-**
	No	**46**	**92.0**
	Leave alcohol	**4**	**8.0**
4. Duration of alcohol	**<10**	**3**	**75.0**
	10---19	**1**	**25.0**
	=>20years	**-**	**-**
	Mean±SD (Range)	**9.8±5.6 (6-18)**	
5. Types of the valve disease (depending on echocardiography)	**Aortic**	**21**	**42.0**
	Mitral	**19**	**38.0**
	Aortic & Mitral	**2**	**4.0**
	Aortic & Tricuspid	**5**	**10.0**
	Mitral & Tricuspid	**3**	**6.0**

Continues……

Table (3)To be continued

		F	%
6. Degree of impairment valve (depending on echocardiography)	**Mild**	**-**	**-**
	Moderate	**3**	**6.0**
	Severe	**40**	**80.0**
	Sever & Mild	**7**	**14.0**
7. Regular uptake of anticoagulant agents	**Yes**	**46**	**92.0**
	No	**4**	**8.0**
8 . EF%	**<40**	**8**	**16.0**
	40---49	**12**	**24.0**
	50---59	**20**	**40.0**
	60---69	**5**	**10.0**
	=>70	**5**	**10.0**
	Mean±SD(Range)	**59.2±12.7(30-77)**	
9. Chronic diseases	**Hypertension**	**10**	**20.0**
	Diabetes	**4**	**8.0**
	Renal failure	**-**	**-**
	HT+DM	**6**	**12.0**
	No	**30**	**60.0**
10. BMI	**Underweight**	**4**	**8.0**
	Normal	**17**	**34.0**
	Overweight	**17**	**34.0**
	Obesity I	**11**	**22.0**
	Obesity II	**1**	**2.0**
11. Follow up	**Yes**	**44**	**88.0**
	No	**6**	**12.0**
12. Valve replacement	**Mechanical**	**46**	**92.0**
	Tissue	**4**	**8.0**
13. Operation time	**(55-63)**	**4**	**8.0**
	(64-72)	**11**	**22.0**
	(73-81)	**17**	**34.0**
	(82-90)	**6**	**12.0**
	(91-99)	**4**	**8.0**
	(100-108)	**3**	**6.0**
	(109-117)	**5**	
	Mean±SD(Range)	**79.9±17(55-117)**	
14. Post-operative time	**(3-8)**	**٧**	**14.0**
	(9-14)	**7**	**14.0**
	(15-20)	**20**	**40.0**
	(21-26)	**10**	**20.0**
	(27-32)	**5**	**10.0**
	=>36	**1**	**2.0**

F: Frequency , **%:** Percentage , BMI: Body Mass Index , EF: Ejection Fraction

The results of table (3) indicate that the highest percentages (74%)of the sample are no smoking , the majority (92.0%) of sample are didn't drink alcohol ,the highest percentage of (42.0%)were aortic valve and (38.0%) were mitral valve, the high percentage of degree of impairment valve (80.0%)were the sever degree , majority of sample regular uptake of anticoagulant agents were (92.0%),Ejection Fraction (EF%) the highest percentage (40.0 %) heart ejection(50–59%) .

Conferring the casualty to chronic disease the highest percentage (60.0 %) didn't have chronic disease ,In respect of body mass index the results show that the highest percentage (88.0%) were regular follow up ,the majority (92.0 %) of sample used mechanical valve .In touching the operation time (cross clamp time) the highest percentage (34.0 %) of sample was need period from (73-81)min ,with average of operation time 79.9min to complete valve replaced and the post operation time the highest percentage (40.0%) of sample was (15-20) month

Table (4): Mean Of Score, Standard Deviation For And Patients Post Heart's Valve Replacement Group

Functional Performance For Patients Post Heart's Valve Replacement	**M**.S	**S.D**	Ass
1. Physical well-being (Q=7)	**14.3**	**±2.9**	**M**
2. Family and social well-being (Q=5)	**11.0**	**±2.3**	**L**
3. Emotional well-being (Q=6)	**13.3**	**±2.2**	**M**
4. Functional well-being (Q=7)	**14.3**	**±3.0**	**M**
Total Function Performance Assessment (Q=25)	**52.8**	**±4.1**	**M**
Low	**No.**	**%**	
	10	**20.0**	
Moderate	**40**	**80.0**	
High	**-**	**-**	

M.S. Mean of Scores , S.D: Standard deviation, Ass: Assessment , M: Moderate, L: Low**.**

Table (4) deals with assessment Functional Performance main domains towards patients Post Heart's Valve Replacement according to cutoff points that show the total functional performance post hearts valve replacement were moderate.

Table (5) : Association Of Total Functional Performance Assessment Among Patients Post Heart's Valve Replacement Group Related To Socio- Demographic Characteristics

Socio- Demographic Data		patients post heart's valve replacement				Chi-square	DF	P value
		Total Functional Performance Assessment (Q=25)						
		Low		Moderate				
		F	%	F	%			
1. Age (years)	<40	1	10.0	10	25.0	5.870	1	0.042* S
	40---49	2	20.0	16	40.0			
	50---59	2	20.0	8	20.0			
	60---69	3	30.0	6	15.0			
	=>70years	2	20.0	-				
2. Sex	Male	6	60.0	17	42.5	3.023	3	0.321 NS
	Female	4	40.0	23	57.5			
3.Marital status	Single	-	-	6	15.0	0.803	1	0.524 NS
	Married	8	80.0	26	65.0			
	Widowed	1	10.0	6	15.0			
	divorce	1	10.0	2	5.0			
4.Level of Education	Illiterate	6	60.0	3	7.5	0.276	1	0.008** HS
	Read & Write	1	10.0	7	17.5			
	Primary graduate	3	30.0	7	17.5			
	Intermediate graduate	-	-	7	17.5			
	Secondary graduate	-	-	7	17.5			
	Diploma	-	-	4	10.0			
	University& Higher education	-	-	5	12.5			
5. Employment	Employed	4	40.0	11	27.5	3.43	1	0.077 NS
	Business man	1	10.0	6	15.0			
	Retired	1	10.0	7	17.5			
	Housewife	3	30.0	13	32.5			
	Not working	1	10.0	3	7.5			
6. Resident	Urban	7	70.0	30	75.0	2.19	2	0.747 NS
	Rural	3	30.0	10	25.0			
7 . Socio-economic status level	Low	8	80.0	10	25.0	0.12	2	0.004 ** HS
	Middle	2	20.0	18	45.0			
	High	-		12	30.0			

F: frequency , **%:** percentage , **: significant at p value≤ 0.05 , DF : Degree of freedom , HS: High significant , NS :Non significant

The Table (5) shows that there is no statistically significant different association between Total Functional Performance among patients post heart's valve replacement group and Socio-Demographic Characteristics. at p value≤ 0.05 except age , Level of education , Socio-economic status level there was statistically significant difference p-value was p≤ 0.05.

Table (6) : Association Of Total Functional Performance Assessment Among Patients Post Heart's Valve Replacement Group Related To Clinical Information

Clinical information		Patients Post Heart's Valve Replacement				Chi-square	DF	P value
		Total Functional Performance Assessment (Q=25)						
		Low		Moderate				
		F	%	F	%			
1. Smoking	Yes	-	-	3	7.5	4.870	2	0.496 NS
	No	7	70.0	30	75.0			
	Leave smoking	3	30.0	7	17.5			
2 . Alcohol	Yes	-	-	-	-	3.023	3	0.794 NS
	No	9	90.0	37	92.5			
	leave alcohol	1	10.0	3	7.5			
3.Valve replacement	Aortic	4	40.0	17	42.5	0.803	1	0.141 NS
	Mitral	2	20.0	17	42.5			
	Aortic & Mitral	-	-	2	5.0			
	Aortic &Tricuspid	2	20.0	3	7.5			
	Mitral &Tricuspid	2	20.0	1	2.5			
4. Degree of impairment	Mild	-	-	-	-	0.237	2	0.723 NS
	Moderate	-	-	3	7.5			
	Severe	8	80.0	32	80.0			
	Sever & Mild	2	20.0	5	12.5			
5. Regular uptake of anticoagulant	Yes	6	60.0	40	100	0.927	1	0.044* S
	No	4	40.0	-	-			
6. Ejection Fraction (EF%)	<40	5	50.0	3	7.5.	2.43	1	0.004 ** HS
	40---49	3	30.0	9	22.5			
	50---59	1	10.0	19	47.5			
	60---69	1	10.0	4	10.0			
	=>70	-	-	5	12.5			
7.follow up	Yes	4	40.0	40.	100.	1.13	2	0.042* S
	No	6	60.0	-	-			
8. Chronic diseases	Hypertension	2	20.0	3	-	0.82	2	0.362 NS
	Diabetes	3	10.0	2	7.5			
	Renal failure	-	-	-	-			
	HT+DM	-	-	-	-			
	No	5	70.0	35	٩2.5			
9. BMI	Underweight	1	10.0	3	7.5	9.82	1	0.362 NS
	Normal	6	60.0	11	27.5			
	Overweight	2	20.0	15	37.5			
	Obesity I	1	10.0	10	25.0			
	Obesity II	-	-	1	2.5			
10. valve replacement	Mechanical	٦	60.0	٤٠	100.0	5.870	3	0.05* S
	Tissue	4	40.0	-	-			
11. Operation time	(55-63)	-	-	4	10.0	0.803	2	0.222 S
	(64-72)	٢	٢0.0	9	22.5			
	(73-81)	-	-	17	42.5			

Continue ……..

Table(6) To be continue

		F	%	F	%	Chi square	DF	P value
	(82-90)	-	-	6	15.0			
	(91-99)	2	20.0	2	5.0			
	(100-108)	1	10.0	2	5.0			
	(109-117)	٥	٥٠,٠	-	-			
12. Post-operative time	(3-8)	٦	٠.٦٠	1	2.50	5.333	1	0.04* S
	(9-14)	٣	30.0	4	10.0			
	(15-20)	-	-	20	50.0			
	(21-26)	-	-	10	٢٥,٠			
	(27-32)	-	-	5	12.5			
	=>36	١	١٠,٠	-	-			

F: frequency , **%:** percentage , **: significant at p value≤ 0.05, **DF** : Degree of freedom ,**HS**: High significant , **NS** :Non significant **BMI**: Body Mass Index , **EF**: Ejection Fraction .

Table (6) shows that there is no statistically significant different association between total functional performance among patients post heart's valve replacement group and clinical information. at p value≤ 0.05 except regular uptake of anticoagulant agents, ejection fraction, operation time, follow up mechanical valve and post operation time.

Discussion:

1. Discussion Distribution of the patients post heart's valve replacement by Socio- Demographic Characteristics:

Throughout the course of data analysis table number (2) indicates that the highest percentage of the patients post heart's valve replacement group were female (54%) most of them**(36.0)** were (40-49)years old and(68%) married, house wife , the higher percentage of the sample were (20%) were primary graduate ,(74%)were addressed in the Urban ,In relative to the Socio-economic status the highest percentage of the patients were middle. This finding agrees with the literature, the Socio-Demographic of a total of 414 patients underwent surgery for AVR alone or in combination with mitral valve replacement a women as a group had a greater mean age (69.9 ± 7.8 years) than men (64.5 ± 11.1 years) (p <0.001) and a higher frequency of isolated aortic stenosis were 86.6%) female than men(73.1%)[6]

2. Distribution of the patients post heart's valve replacement by clinical information. The results of table (3) reveal highest percentages (74%)of the sample are no smoking , the majority (92.0%) of sample are didn't drink alcohol ,the highest percentage of (42.0%)were aortic valve and (38.0%) were mitral valve, This finding agrees with the literature for 389 patients with artificial valve replacement that highest percentage with aortic valve disease at (61.0%) and (35,7%)were mitral valve disease and the remaining is mixed valve[14]. the high percentage of degree of impairment valve (80.0%)were the sever degree , majority of sample regular uptake of anticoagulant agents were (92.0%),Ejection Fraction (EF%) the highest percentage (40.0 %) heart ejection(50–59%) , This finding agrees with the literature, in which mean of left ventricular ejection fraction were

(55) with rang (45-64) and highest percentage with chronic disease with hypertension (76%) and diabetic (26%)for 389 patients with artificial valve replacement.[13]

Touching the casualty to chronic disease the highest percentage (60.0 %) didn't have chronic disease , This finding is consistent with the literature that (35%) aortic valve stenosis patients were smoking and have history of hypertension (20%)[7]

In respect of body mass index the results show that the highest percentage (34.0 %) were overweight .Anent to the follow up that indicated highest percentage (88.0%) were regular follow up ,the majority (92.0 %) of sample used mechanical valve .In touching the operation time (cross clamp time)the the highest percentage (34.0 %) of sample was need period from (73-81)min ,with average of operation time 79.9min to complete valve replaced and the post operation time the highest percentage (40.0%) of sample was (15-20) month ,This finding disagree with the literature about determine late outcome result for patients post aortic valve replacement in elderly patient he finding the majority used to replaced valve was biological valve at (92.0%) and remain were mechanical valve (8.0%) for 2890 patients ≥70 years of age (mean, 78±5 years) who underwent AVR.[8]

3. Relationship between of Total Functional Performance for Patients Post Heart's Valve Replacement with Their Socio-Demographic: table (5)show there is no statistically significant difference association between total functional performance among patients with heart's valve replacement group and Socio-Demographic characteristics. at p value≤ 0.05 except age , Level of education , Socio-economic status level there was statistically significant difference p-value was p≤ 0.05, the result for age agree with literature but disagree with gender, the significant relationship between post operative quality of life { age (p = 0.029) and female gender (p = 0.002)} for 1675 patients who perform cardiac surgery[16], that factors such as education patient play important factor identify the role of anticoagulation drug, side effects, interaction with the digested food, and simultaneous use of other drugs and also lifestyle influenced[17]

4.Discussion Association of Total Functional Performance Assessment among patients post heart's valve replacement group related to clinical information .

Table (6) reveals that no statistically significant different association between total functional performance among patients post heart's valve replacement group and clinical information. at p value≤ 0.05 except regular uptake of anticoagulant agents, ejection Fraction, operation time, follow up mechanical valve and post operation time. This finding agrees with the literature about long-term survival of patients undergoing mitral valve replacement for 10 years post operative he find the long-term survival post operation is lowers with long period post operative ,he find the in first period the high level at 82.6% and second period were moderate at 64.7%, but third period were low at 37.2%.[9], This finding agrees with the literature for patient post aortic valve replacement had a better survival and less mortality with a mechanical valve(79%,) than a bioprosthetic valve(66%) with (p = 0.02) and he found that no statistical significant different about appearance of complication between two type but found Primary valve failure occurred mainly in patients <65 years of age (bioprosthesis vs. mechanical, 26% vs. 0%, (p < 0.001) for AVR and 44% vs.

4%, p = 0.0001 for MVR), and in patients ≥65 years after AVR, primary valve failure in bioprosthesis versus mechanical valve was 9 ± 6% versus 0%, p = 0.16.[10] ,This finding agrees with the literature for 2890 patients ≥70 years of age who underwent aortic valve replacement from ,the survival rate were lower gradually ,the first period were 68%, moderate 34%, and third 8%.[8], The functional status after the aortic valve replacement and follow-up was significantly improved for the total group of surviving patients at (78.9%)at 360-days[15].

Recommendations:

According to the results of the study the researcher, recommends the following:-

1.Recomendating that to replace valve disease with biologic valve (tissue valve) for elderly patient to reduce complication anticoagulation drugs and enhance survival post operation.

2.Establishing Psychological consultation to copy the patients with emotional and social impact which results from the operation.

3.An education program should be designed to increase patient's education about self-care and, increase satisfaction with care

4. Using education and training programs (regular lectures for nursing staff) to improving the expertise and knowledge of nurses to play an essential role in fostering patients care and prevent valve infection.

5. Further study that can assess nurse's knowledge about how to deals with functional performance patients

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