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Kidney Transplantation, Hope to Life: Case Study

"Desperate Diseases Require Desperate Remedies"

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ABSTRACT

Introduction: Kidney transplantation has come as a hope for patients suffering from End Stage Kidney Disease. Successful kidney transplantation improves the quality of life and prolongs the survival of uraemic patients compared to long term dialysis patients. **Case Presentation:** Patient is 28 years male is hypertensive, CKD 5 detected in May 2013 since then on maintenance hemodialysis came up for renal transplant with wife as potential donor. **Management:** He was induced with ATG and triple immunosuppression. Right sided Renal transplant was done on 29/07/13. Right kidney of donor was placed in right iliac fossa and vascular anastomoses done to external iliac vessels. Ureter stent was placed. Stent removal after three weeks. Staple removal on 09/08/13. Diuresis was brisk and immediate.**Conclusion:** Post-operative period was uneventful, tubes, drain were removed as per protocol and S.creatinine at discharge was 1.34 mg/dl. Surgical wound is clear and vitals are stable. He was discharged in stable condition with prescribed low salt diet. Nutritional therapy is essential in patients with kidney transplant. Nutrition counseling was done.

INTRODUCTION

Kidney transplantation has come as a hope for patients suffering from End Stage Kidney Disease. Successful kidney transplantation improves the quality of life and prolongs the survival of uraemic patients compared to long term dialysis patients

CASE PRESENTATION

Patient is 28 years male is hypertensive, CKD 5 detected in May 2013 since then on maintenance hemodialysis came up for renal transplant with wife as potential donor.

MANAGEMENT

He was induced with ATG and triple immunosuppression. Right sided Renal transplant was done on 29/07/13. Right kidney of donor was placed in right iliac fossa and vascular anastomoses done to external iliac vessels. Ureter stent was placed. Stent removal after three weeks. Staple removal on 09/08/13. Diuresis was brisk and immediate.

Risks of the procedure

- Bleeding
- Infection
- Blockage of the blood vessels to the new kidney
- Leakage of urine or blockage of urine in the ureter
- Initial lack of function of the new kidney

Before the procedure

Psychological and social evaluation Psychological and social issues involved in organ transplantation, such as stress, financial issues, and support by family and/or significant others are assessed.

Blood tests Blood tests are performed to help determine a good donor match, to assess your priority on the donor list and to help to improve the chances that the donor organ will not be rejected.

Diagnostic tests Diagnostic tests may be performed to assess your kidneys as well as your overall health status. These tests may include X-rays, ultrasound procedures, kidney biopsy.

After the procedure

Patient will have a catheter in your bladder to drain your urine. The amount of urine will be carefully measured to evaluate the new kidney's function. Patient will receive IV fluids until you are able to take in adequate food and fluids.

Patient immunosuppression (antirejection) medications will be closely monitored to make sure you are receiving the optimum dose and the best combination of medications.

Living with a transplant

It's recommended that you:

- quit smoking if you smoke
- eat a healthy diet
- lose weight if you are overweight or obese; ideally you want to achieve a body mass index of less than 25.

There are two main treatment options when it is known kidney failure is likely to occur:

- Dialysis, where a mechanical device is used to replicate the functions of the kidney
- Kidney transplant, which, if possible, is usually the preferred option because it is much less inconvenient than having dialysis.
- Blood clots

Widely used immunosuppressants are:

- tacrolimus
- ciclosporin
- sirolimus
- azathioprine

- mycophenolate
- prednisolone

MEDICATION HISTORY

MEDICINE	DOSE	FREQUENCY	PURPOSE
Inj Magnex Forte	1.5gm	1-0-1	To treat systemic infection
Inj Cefazolin	1 gm	1-0-1	Antibiotic
Inj Solumedrol	1 gm	OD	Immunosuppressive
Inj Emeset	4 mg	1-1-1	To stop vomiting
Inj Calcium Glucomate	10 %	NS	To prevent lack of calcium
Inj Magnesium sulphate	50 %	OD	To prevent low magnesium level
Tab Sandocol	500 mg	2-2-2	Calcium supplementation
Tab Nicardia	20 mg	1-0-1	To treat high blood pressure
Tab Myfortic	360 mg	1-0-1	Immunosuppressive
Tab Tacrograf	2 mg	1-0-1	Immunosuppressive
Tab Omnacortil	20 mg	1-0-0	Anti - inflamatory

Surgery: Procedure done on 29th July, 2013

BIOCHEMICAL PARAMETERS

PARAMETER	RESULT	NORMAL RANGE
Haemoglobin	12.5 gm/dl	11.5 – 14.5
FBS	95 mg/dl	70 – 140
S. SGPT	8 U/L	5 – 40
S.SGOT	10 U/L	5 – 45
S. Urea	35 mg/dl	15 – 45
S. Creatinine	7.4 mg/dl	0.5 – 1.2
S. Sodium	138 mmol/L	135 – 145
S. Potassium	4.2 mmol/L	3.5 – 45
TSH	0.39 uIU/ml	0.34 – 5.6

24 HOUR DIETARY RECALL

MEAL	MENU	AMT	ENERGY (kcal)	CHO (gm)	PROTEIN (gm)	FAT (gm)
Early morning	Tea(with sugar)	100 ml	53.4	7.17	1.65	2.05
Breakfast	Idli	2	178.05	32.4	5.64	2.86
	Sambhar	1 bowl	52.5	9	3.435	0.27
Lunch	Rice	11/2 cup	103.5	23.46	2.04	0.15
	Dal	1 bowl	99.25	9.36	3.5	5.29
Refreshment	Tea(with sugar)	100 ml	53.4	7.17	1.65	2.05
Dinner	Rice	1 cup	69	15.64	1.36	0.1
	Dal	1 bowl	99.25	9.36	3.5	5.29
	Vegetable	1 bowl	97.5	12.02	0.98	5.09
Total			**805.85**	**125.58**	**23.75**	**23.15**

GOAL OF MEDICAL NUTRITION THERAPY

- Calories, protein, fluid, vitamins and minerals are necessary to regain your immunity, maintain or achieve your weight goal, strengthen your muscles.

- Your goal is to maintain or achieve an appropriate weight for your body size.

- It is important to consume a nutritious diet, including a variety of foods, to promote recovery of your immune system.

- A high fluid intake helps flush your kidneys when you take medications that can impair kidney function, including Cyclosporine & Tacrolimus antibiotics.

- A high salt intake can worsen fluid retention caused by predniselone. Avoid salt and salty foods, such as canned, instant and frozen soups and entrees; soy sauce; cured meats and packaged sauces and seasonings.

- To prevent from further complication.

NUTRITIONAL REQUIREMENT

Energy : 2000 Kcal

Protein : 114 gm

Fat : 44.44 gm

Carbohydrate : 300 gm

Diet at hospital

Date	Diet	Energy (kcal)	Protein (gm)
28/07/13	Low salt renal soft diet	1300	30
29/07/13	NPO	-	-
30/07/13	Low salt renal soft diet	1000	10
01/08/13	Low salt renal soft diet	1300	30
03/08/13	Low salt renal soft diet	1300	30
05/08/13	Low salt renal soft diet	1400	40

DISCHARGE MEDICATION

MEDICINE	DOSE	FREQUENCY	PURPOSE
Tab Omnacortil	20 mg	1-0-0	Anti - inflamatory
Tab Tacrograf	2 mg	1-0-1	Immunosuppressive
Tab Myfortic	360 mg	1-0-1	Immunosuppressive
Tab Septram	SS	0-0-1	Antibiotic
Tab Nicardia R	20 mg	1-1-1	To treat high blood pressure
??Arkamin	0.1 mg	1-0-1	To treat high blood pressure

CONCLUSION

Post-operative period was uneventful, tubes, drain were removed as per protocol and S.creatinine at discharge was 1.34 mg/dl. Surgical wound is clear and vitals are stable. He was discharged in stable condition with prescribed low salt diet.Nutritional therapy is essential in patients with kidney transplant. Nutrition counseling was done.

RECOMMENDATION

You must not take any medicine or nutritional supplement that is not approved by a transplant physician because of the risk of interaction with your immunosuppressive

(antirejection) medications.**Routine Follow-up care should be followed by transplant patient.**

Should follow nutritional guidance

- Avoid feasting or fasting
- Do not eat leftovers
- Avoid packed beverages, food items and canned foods
- A small amount of food and drink that high in fat and sugar
- Avoid food that contains high levels of salt, as salt can raise your blood pressure, which can be dangerous in people with a kidney transplant

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