

DGAFMS MEMORANDUM NO 166

CHRONIC RENAL FAILURE

Introduction

1. Chronic Renal Failure (CRF) leading to End Stage Renal Disease (ESRD) is being increasingly diagnosed in clinical practice with modern modalities of investigation of renal diseases. More importantly, modern medicine offers definitive treatment for this once uniformly fatal clinical entity, and excellent potential for total rehabilitation of the patient in the society and at the workplace.
2. This memorandum aims to lay down guidelines for Armed Forces Medical Services for the management of patients of ESRD.

Definition

3. Chronic Renal Failure is defined as unequivocal and persistent elevation of renal function parameters such as blood urea and serum creatinine above the normal range for more than six months. Renal insufficiency of CRF almost never recovers, on the other hand, such patients invariably have a progression of renal failure to ESRD over a period of time.
4. End Stage Renal Disease (ESRD) is defined as renal failure of a severity, which is incompatible with life without institution of renal replacement therapy. In absolute terms, when Glomerular Filtration Rate (GFR) declines to less than 10ml/min/1.73 sq. meter of body surface area, the patient is said to be in ESRD and in need of renal replacement therapy.

Renal Replacement Therapy

5. Renal Replacement Therapy comprises :-
 - (a) Dialysis, and
 - (b) Renal Transplantation
6. Once a patient of CRF reaches ESRD, maintenance dialysis is required to prevent fatal complications of CRF. This can be administered in two forms: -
 - (a) Continuous Ambulatory Peritoneal Dialysis
 - (b) Maintenance Haemodialysis

7. Both the modalities of dialysis are effective renal replacement therapies but they are cost-intensive and patient rehabilitation while on dialysis is less than complete. However, dialysis is an important bridge to renal transplant, which is the definite treatment of ESRD.

8. Renal transplantation entails identifying a suitable voluntary living kidney donor or a cadaver kidney donor who is compatible with the patient as regards the ABO blood group and HLA or MHC Antigen type. A kidney from such a donor is surgically transplanted into the patient. These patients are given immunosuppressive therapy to prevent allograft rejection and need to be followed up life long.

Management of ESRD in Armed Forces

9. Patients suffering from chronic renal failure will be referred to a service Nephrology Center immediately upon diagnosis. Upon admission to a Nephrology Center, a detailed evaluation will be done by the Nephrologist regarding the severity of renal failure and the basic etiopathology of the renal disease.

10. These patients will be initiated on conservative measures for Chronic Renal Failure, placed in low medical classification, and recommended for sheltered employment. As a rule such patients will not be posted to high altitude, active field duties or in units involved in CI ops. Such individuals will be recommended: -

- (a) Posting back to their units (if units are located in peace station) if they are to be reviewed once in 6 months.
- (b) Posting to a station within 4 hours travelling time of service nephrology center if they are required to be reviewed more than once in 6 months.
- (c) Postings to a station where a service nephrology center is located if they are required to be reviewed more than once a month.

11. These patients will also be educated regarding the eventual need for renal replacement therapy and counselled to keep their families informed of the same. These patients will be tested

for HbsAg, Anti-HCV antibodies and anti HIV antibodies in their blood and will be vaccinated against HBV disease if found to be HbsAg negative.

12. Patients deemed to have End Stage Renal Disease will be admitted to a service Nephrology Center for renal replacement therapy. As a rule, such patients will be provided maintenance dialysis for a period of one year from the date of initiation of dialysis and encouraged to identify a prospective voluntary kidney donor for undergoing renal transplantation. The modality of maintenance dialysis may be intermittent haemodialysis or CAPD, based on patient evaluation, technical feasibility and treating nephrologist's recommendations.

13. Kidney Donors will be identified from within first-degree relative's viz. parents, siblings or children. Where such donors are either not available or not willing, a spousal donation may be accepted.

14. In exceptional circumstances, where first degree relatives are either not available or unfit to donate on medical grounds, an emotionally related donor may be considered after obtaining approval of hospital ethics committee and clearance from the authorization committee of the state where the transplant centre is located, as per the provisions of the Organ Transplant Act.

15. Where no donor is identified even one year after initiation of dialysis, the patient will be invalided out of service in Med Classification P5 (Permanent) of SHAPE and transferred to an Army Dialysis Center of AGIF for maintenance dialysis.

16. Where a prospective suitable donor has been identified but a renal transplantation can not be done due to technical. / Medical reasons, the patient will be continued on maintenance dialysis for another two years before invalidating out of service on medical grounds.

DISPOSAL OF PATIENTS FOLLOWING SUCCESSFUL TRANSPLANTATION

17. Following successful renal transplantation, patients will be recommended a period of convalescent leave of four to eight weeks. As patients need to be reviewed one to two times per week in the first three months after transplantation, such patients will be attached to local station headquarters. They will spend their leave in station and report for regular reviews.

18. On review following sick leave, the patient will be placed in Med cat p3(T-24). A copy of medical board proceeding will be forwarded to the Records in case of JCOs/OR and to AHQ in case of Officers for posting on medical grounds to a station with a service Nephrology Center to enable patient to report for regular reviews. Upon reclassification, the patient may be observed in P3 (Temp) for another two stretches of 24 weeks. If the graft function is found to be normal, the patient can be upgraded to medical classification P2 (T-24) for up to two terms and then placed in classification P2 (Permanent) with a provision for annual reviews. If the graft function is unsatisfactory, he will be placed in medical classification p3 for the one year at a time. Recommendations regarding posting will depend on the frequency of reviews by Nephrologist (Refer para 10 above).

Disposal of Patients following an unsuccessful Transplantation

19. Primary graft function is achieved in more than 95% of patients following transplantation. If, for any reasons, the renal transplantation is unsuccessful, the patient will be returned to maintenance dialysis. He/she will be offered a second transplantation provided a suitable voluntary kidney donor is available. If a donor is not forthcoming, he/she will be invalided out of service on completion of one year on maintenance dialysis.

20. If however, a suitable donor is available but transplantation is not possible for technical/medical reason, the period of dialysis may be further extended by another two years before the patient is invalided out of service on medical grounds.

DISPOSAL OF PATIENTS FOLLOWING LATE FAILURE OF ALLOGRAFTS

21. These patients will be offered a second transplantation provided a suitable voluntary kidney donor is available. Other instructions will be same as para 19 above.

ENTITLEMENT OF PATIENTS FOR RENAL REPLACEMENT THERAPY

22. All Armed Forces personnel & their entitled family members will be entitled renal replacement.

23. Ex-serviceman & their spouses will not be entitled renal replacement therapy from service hospitals. However, they will be evaluated by service nephrologists and referred to AGIF approved civil nephrology centers for further management under AGI' Medical Benefit Scheme.

MANAGEMENT OF RENAL DONORS IN ARMED FORCES

24. Living related donors for service personnel will be identified from among parents, siblings and children. Where such a donor is not available or forthcoming, spouse may be accepted as donor. The particulars of the donors will be verified from the service records of serving personnel and a certificate of verification will be rendered by OC/CO Unit.

25. In case of donors for dependents of service personnel, the treating Nephrologist will carefully verify the relationship and proof in the form of certificate from the Gram Panchayat/Municipality/Municipal Corporation will be obtained. To further confirm the relationship, an affidavit will be obtained both from service personnel and the donor stating the relationship with the patient.

26. Donors found fit to donate will be admitted to service hospitals with renal transplantation facilities. Postnephrectomy, the donors will be reviewed in OPD once after 15 days of discharge from hospital and thereafter as deemed necessary, by transplant surgeons.

27. The liability of the service Transplantation Centers towards the donors after nephrectomy will be limited only to complications arising directly as a consequence of donor nephrectomy. Some examples are – Wound infection, incisional hernia, ipsilateral hydrocoele etc. The donor will not be entitled to renal replacement therapy at a service hospital in the rare event of failure of his remaining kidney leading to ESRD.

DONATION OF KIDNEY BY HEALTHY SERVING PERSONNEL

28. Healthy serving personnel willing to donate a kidney to their dependents suffering from ESRD will be permitted to do so after applying for permission from their OC/CO units. On recommendation of treating nephrologist, the OC/CO unit will obtain a certificate from the service personnel stating acceptance of all consequences of a kidney donation including placement in low medical classification and its effect on future postings/promotions. Following kidney donation, the service personnel will be sent on convalescence leave of four to eight weeks and reviewed thereafter by the transplant surgeon. They will be observed in low medical classification P3 (Temp) for up to two spells on 24 weeks each and P2 (Temp) for another two spells of 24 weeks each. Thereafter, if the remaining kidney continues to show normal renal functions, they will be upgraded to SHAPE-1 after obtaining the opinion of urologist with the concurrence of Senior Advisor (Surgery).

29. Service personnel, following renal donation can develop renal disease in the remaining kidney just as a healthy individual. The attributability will be guided by the nature of renal disease. For instance, development of Diabetic nephropathy or Urolithiasis at a later date will not be attributable to service, being constitutional disorders. However, post infectious glomerulonephritis or pyelonephritis will be deemed attributable, being consequences of infections contracted while in service injuries sustained to remaining kidney will be judged in the light of injury report and Court of Inquiry findings.

30. In the rare event of development of CRF/ESRD in service personnel following renal donations the same rules will apply so long as patients is in service. Upon retirement/supernnuation, he/she will be treated in the same manner as Ex-Servicemen with ESRD (Refer para 23 above).

MAINTENANCE IMMUNOSUPPRESSION.

31. Renal transplant recipients will be provided free post transplant immunosuppression life long and regularly followed up by service Nephrologists, provided they remain eligible for treatment from service sources.

CENTER TRANSPLANT REGISTRY

32. Details of all Renal Transplants done in service nephrology Centers will be forwarded once every quarter to a central transplant registry which will be located at Nephrology Department, Army Hospital (Research & Referral) as per format at appx 'A' . The quarterly reports will also update the follow up details of earlier transplants. This will assist in data generation for research and analysis purposes as well as in improving the overall management of ESRD patients in services.

Appx 'A'

DEPARTMENT OF NEPHROLOGY, DIALYSIS AND RENAL TRANSPLANT

**RENAL TRANSPLANT
RECIPIENT INFORMATION**

PATIENT

NAME AGE Yrs..... SEX M / F

RELATIONSHIP..... NO..... RANK.....

UNIT ADDRESS.....

PRESENT ADDRESS

HOUSE NO..... VILLAGE..... POST OFFICE..... DISTT.....

CITY..... STATE..... PIN..... PHONE.....

PERMANENT ADDRESS

HOUSE NO..... VILLAGE..... POST OFFICE..... DISTT.....

CITY..... STATE..... PIN..... PHONE.....

CLINICAL PROFILE

EDEMA	POLYURIA	NOCTURIA	HEMATURIA	OLIGURIA	DYSURIA
BREATHLESSNESS		WEAKNESS	ANOREXIA	NAUSEA	VOMITING
HICCOUGHS		HYPERTENSION		DIABETES	
STONE DISEASE		FEVER	JOINT PAIN	RASH	
DOUBLE VOIDING		PARESTHESIAS		JAUNDICE	
BLOOD TR		RENAL BIOPSY			

FAMILY HISTORY:.....

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EXAMINATION

HT.....cms WT..... Kgs BMI..... PULSE RATE...../min B.P...../mm Hg
CVs..... SIZE..... MURMUR..... RUB.....
RESP..... CNS..... ABDOMEN..... LIVER..... SPLEEN.....
TEETH..... PSYCH.....
GYNAE.....
VASCULAR ACCESS.....
BLOOD TRANSFUSION.....
HAEMODIALYSIS 1ST..... TOTAL.....
PERITONEAL 1ST..... TOTAL.....
PREVIOUS TRANSPLANT.....
DIALYSIS COMPLICATIONS.....

PRIMARY ILLNESS.....
COURSE DURING HOSPITALISATION.....
HEPATITIS VACCINATION..... ERYTHROPOIETIN..... ATT.....
OTHER RELEVANT INFORMATION.....

INVESTIGATIONS

HAEMOGLOBINGm% TLC...../mm³ diff count p.....%L %M %E %B
PLATELET COUNT...../MM³
PT PATIENT SEC CONTROL SEC PTI INR BT ' ' "
CT PTTK SEC

URINE

COLOUR..... SP..... GR..... ALB..... SUGAR..... RBC..... WBC..... EPI.....
POLYS..... CASTS..... CULTURE..... 24hr PR..... Gms/DAY CCT..... ml/min.....

BIOCHEMISTRY

LIVER Bx LFT..... S BIL..... mg T PRS..... gms%.....
ALB..... gms% GLOB..... gms% AST..... IU/L, ALT..... IU/L BUN..... mg%
S CR..... mg% Ca..... mg% Ph..... mg% ALK PHOS..... IU/L
SUGAR FASTING..... mg% PP..... mg% GTT..... AMYLASE..... IU/L
CPK..... mg% LDH..... mg% CHOL..... mg% TRIGL..... mg%

X-RAY CHEST.....
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X-RAY KUB.....
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USG ABDOMEN	KIDNEY R.....cms	L.....cms	CMD	PCS	LIVER
SPLEEN	PORTAL SYSTEM	LYMPH NODES			
ENDOSCOPY	ESOPHAGUS	STOMACH	DUODENUM		
ECHOCARD EF.....	% MV	TV	AV	PV	RV SYS
DIA	LV	SYS	DIA		

MCU.....

BLOOD GROUP Rh.....HLA A B C PQ PR PQ RP PS

CROSS MATCH.....

CT SCAN

CHEST.....ABD.....HEAD.....

SKELETAL SURVEY.....

SEROLOGY

CMV.....TOXOPLASMA.....HSV.....VDRL.....

LISA.....MTB.....ANTIFUNGAL.....

Hbs Ag.....Hbe Ag.....HbcAg.....

ANTI HCV.....HIV.....