

# A meta analysis of haemodialyses at a rural center of MNR Medical College Hospital

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## Abstract

**Objective:** To study the various complications of Haemodialysis at a Rural health center. **Methods:** This is a meta analysis of 1817 haemodialyses conducted at rural based dialysis centre of MNR Medical College and hospital, sangareddy, on 46 CKD Stage-v patients, to evaluate the incidence of complications, causative factors i.e. etiology etc during the period of 7-11-2009 to 18.8.2011. **Results:** In this study male and female ratio is 2:1. Age ranges from 16 to 65 years. Most of the CKD stage-v patients on HD were belongs to low-socioeconomic group and came for haemodialysis under RAJIV AAROGYASRI Health scheme by the Govt. Etiology: Hypertension 55%, Diabetes mellitus 37% other 8%. Incidence of common complications are hypotension, chills and rigors, nausea and vomiting, chest pain, fever etc. The common complications occurred in the beginning and over a period of times. After the HDS were uneventful. **Conclusion:** Intermittent- haemodialysis is the most common renal replacement therapy for CKD Stage-v patients and critically ill ARF patients also. Relatives did not come forward to donate their kidneys or blood to their CKD Stage-v MHD patients.

**Keywords:** Haemodialysis, CKD Stage-V

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## INTRODUCTION

Incidence of complication are common during the conduction of haemodialyses<sup>1</sup>. The dialysis center of MNR Medical College and hospital, set up in a rural area where the CKD stage-v patients are illiterate and ignorant which could not follow the diet advices drug regimen and even HD schedule. To evaluate the incidence of the complications, etiology, geography condition etc. This analysis was under taken. During haemodialysis, large volumes of blood are exposed to components of the extra

corporeal circuit, including the dialyzer and other foreign substances related to the manufacturing and sterilization process. This interaction between the patients' blood and extracorporeal system can lead to various adverse reactions, which manifest as complications ranging from subtle to severe and fatal. The signs and symptoms are made up of combinations of angioedema, dyspnoea, chest tightness, sneezing, lacrimation, skin flushing; parasthesia burning sensation, nausea, vomiting, abdominal pain. These are called dialysis reactions. Arrhythmias, pericardial, headache, itching are other complications<sup>2</sup>

## MATERIAL AND METHODS

46 CKD Stage-v patients were studied in this analysis for the incidence of common complications that occur during the conduction of haemodialysis.

## RESULTS

**Geographic Area:** All the CKD Stage-v patients undergone HDS at this centre at and around Medak district (42/46)-91.30% and two patients are from other

districts –Nizamabad and Nalgonda and two patients are from other states –one from Karnataka and another from Maharashtra.

**Mode of getting HDs:** Most of the patients undergone HDs-no 40/46=86.95% under Rajiv Aroghyasri and 6/46=13.043% on payments

**Sex:** Male: Female ratio is 31:16 approximately 2:1

**Age:** from 16 years to 65 years

**Age Break-up:** (1) 16-25-6 patients; (2) 26-50 yrs-29 patients (3) 51-65-11 patients, total46

**Machines:** Two (2) Gambro machines-model-AK 96

**Water Supply:** R.D water plant

**Literacy Status:** (1) Illiterates-15(32%); (2) primary education-12(26%); (3) H.S.C-16 (34%); (4) graduates-4(8%)

**Socio-economic status:** most of the patients belong to low-socio-economic group

**DISCUSSION**

KD stage-V patients came for HD to our dialysis centre with the following presenting symptoms

1. Swelling of the face and feet
2. Nausea and vomiting
3. Loss of appetite
4. Breathlessness
5. Loss of weight and
6. Passing scanty urine etc.

The ethological factors among the above 46 CKD stage-v Patients are as follows

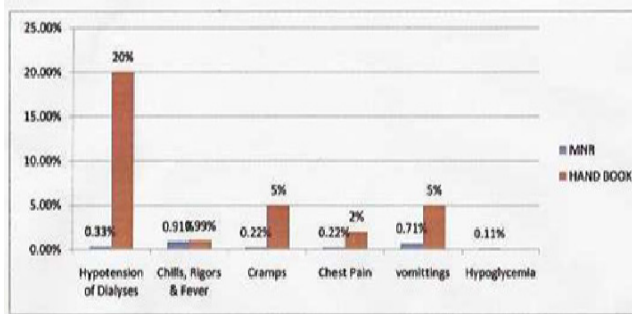
1. Hypertension (55%)
2. Diabetes mellitus nephropathy (37%)
3. Post natal acute kidney injury (2%)
4. ADPKD (4%)
5. Chronic glomerulonephritis CGN (2%)

The incidence of complications at our dialysis centre on CKD stage-v patients during the Haemodialysis include-hypotension, chills and fever, cramps, chest pain, breathlessness, nausea, vomiting, itching, headache etc When compared to the literature available incidence of some of the complications like chills and rigors, fever are the same. The table and graphs are given below<sup>3</sup>.

**Table 1:** Incidence of Complications

Complications	Hypotesion of Dialyses	Chills, Rigors and Fever	Cramps	Chest pain	Vomittings	Hypoglycemia	Breathiessness	Bleeding perrecturm and diarrhoea	Hypertention
	1	2	3	4	5	6	7	8	9
MNR	0.33%	0.91%	0.22%	0.22%	0.71%	0.11%	1.20%	0.05%	0.05%
Hand Book	20%	0.99%	5%	2%	5%				

\*\*\*hand book of dialysis edited by John T. Daugir Dass, Md, 2009 Edition, Page 170



Other complications that occur during haemodialysis are heparin associated thrombocytopenia, bleeding diathesis, cerebrovascular accident<sup>4</sup> etc. Muscle cramps occur up to 20% with dialysis treatment. Heamolysis and airemborsim are the other complications of heamodialysis<sup>5,8</sup>.

**Co-morbid Conditions**

Obesity, RHD, LRTI, Concentric LVH, severe systolic dysfunction, severe anaemia, pleural effusion, abdominal pain<sup>6</sup>. Weight gain/loss/no change: weight gain-22%, weight loss-26% and no change in 52% of CKD stage-v patients on MHD.

**Counselling for Diet**

Health care and renal transplantation<sup>7</sup>- All the eligible patients were counseled for renal transplantation. One CKD Stage-v patient underwent renal transplantation. All the CKD Stage-v patients who underwent HDs were counseled regarding diet, drugregimen and daily health care and change of life style.

**CONCLUSION**

46 CKD stage-v patients from rural base got HDs done at our dialysis centre mostly under Rajiv Aarogyasri. In the beginning patients got vomittings chills and rigors. Later

HDs were conducted uneventful and 50% are the attending to their routine work on NON-HD day. But in spite of repeated counseling and showing exemplary results of post transplant recipients and donors, most of family members are not willing to donate their kidneys to their beloved ones because of ignorance.

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