

Results: Out of 320 venipunctures recorded, 203 were considered for analysis (117 - insufficient data). The mean age of patients was 4.7 years. 85 (41.9%), 85(41.9%) and 33(16.2%) procedures were done in OPD, ED and PW respectively. General paediatrics department (n=116, 57.1%) had most patients, followed by nephrology (n= 34, 16.7%) and hematooncology (n= 33, 16.2%). 84/203 (41.3%) children were suffering from chronic disease. Nurses performed 103(50.7%), followed by phlebotomists (90 (44.3%)) and junior doctors (10(4.9%)). Only 17.2% requests had physician instruction regarding vascular access.

124 patients (61.1%) had needle stick and 79 patients (38.9%) had cannula placed. The preferred site used for needle stick method was cubital fossa (n=62, 50%) followed by dorsum of hand (n= 60, 48.3%). For cannula placement, 77/79 venipuncture attempts were made in dorsum of hand. 7% of patients required more than 1 attempt to obtain sufficient blood samples. Of 203 patients, 46 had difficult access and all these patients (100%) who had this difficult venous access were chronic disease patients (Kidney 50%, hematology 37.5%, endocrine 12.5%). Only 60% of doctors and 33.3% of phlebotomists preferred dorsum of hand as first site.

Conclusions: Vein preservation education is lacking and should be implemented in all hospitals. This strategy benefits children with chronic disease most, especially kidney disease. Interventions like flagging patients with chronic disease, use of wrist bands and bracelets, educating parents/children on vein preservation can help these patients.

SUN-200
PULMONARY FUNCTION TESTS
IN HEMODIALYSIS PATIENTS AND THEIR
FIRST-DEGREE RELATIVES AS KIDNEY DONORS



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Introduction: End-stage kidney disease-ESKD-patients not infrequently develop pulmonary complications such as oedema, infection or pleurisy and eventually need renal replacement therapy(RRT) via dialysis (either hemodialysis or peritoneal dialysis) or kidney transplantation to survive.

Methods: This prospective study evaluated the pulmonary function tests of patients with chronic kidney disease (CKD) and healthy donors who attended the kidney donor clinic at the Royal Hospital. The study was carried on during the period from Jan '2010 till Jan "2015. All patients have undergone Pulmonary Functions Test (PFT) at the next day post their hemodialysis session. For statistical analysis, the STATA 12.0 software was used.

Results: FVC was 3.67(0.78) and 3.12 (0.82) for control and CKD participants, respectively, p=0.019. FEV1 was 2.97(0.63) 2.57 (0.74) for control and CKD participants, respectively, p=0.043. On the other hand, the FEV1/FVC ratio was 80.5(6.9) and 81.8(0.74) for control and CKD participants, respectively p=0.56. Similarly, there was no significant statistical difference regarding PEF and TLC between CKD and control participants.

The VC was 3.78(0.73) vs 3.38 (0.55), p=0.04 for control and CKD participants, respectively. The ERV values were 1.41 (0.34) and 1.78 (0.48), p=0.01 for control and CKD participants, respectively. But RV and RV/TLC showed no statistically significant difference between control and CKD participants, as shown in table 1.

The DLCO was 23.29 (4.77) and 18.16 (4.57), p<0.001, for control and CKD participants, respectively. The VA for control and CKD

| Item | Potential Kidney donor | CKD -Recipient for KTX | P. Value |
|----------------|------------------------|------------------------|----------|
| FVC | 3.67 SD 0.78 | 3.12 SD 0.82 | 0.0185 |
| FEV1 | 2.97 SD 0.63 | 2.57 SD 0.74 | 0.0434 |
| FEV1/FVC | 80.48 SD 6.92 | 81.79 SD 9.00 | 0.5605 |
| PEF | 416.89 SD 102.89 | 386.92 SD 105.48 | 0.3099 |
| TLC | 5.39 SD 2.13 | 5.23 SD 2.99 | 0.8347 |
| VC | 3.78 SD 0.73 | 3.38 SD 0.55 | 0.0424 |
| ERV | 1.41 SD 0.34 | 1.78 SD 0.48 | 0.0122 |
| RV | 1.61 SD 2.08 | 1.95 SD 3.00 | 0.6464 |
| RV/TLC | 24.85 SD14.85 | 29.55 SD 16.60 | 0.3172 |
| DLCO | 23.29 SD 4.77 | 18.16 SD 4.57 | 0.0005 |
| DLCO/VA | 5.13 SD 0.88 | 4.47 SD 1.00 | 0.0192 |
| DL/VA adjusted | 5.13 SD 0.17 | 4.46 SD 1.00 | 0.0192 |
| VA | 4.62 SD 0.99 | 4.12 SD 0.84 | 0.0695 |
| IVC | 2.14 SD 0.46 | 1.98 SD 0.61 | 0.3704 |

participants was 4.62 (0.99) and 4.12 (0.84), p=0.06, respectively. DLCO/VA was 5.13 (0.88) and 4.47 (1.0), p=0.01, for control and CKD participants, respectively. The DL/VA adjusted was 5.13(0.17) and 4.46 (1.0), p=0.02, for control and CKD participants, respectively. But, IVC values showed no statistically significant difference between control and CKD participants.

Conclusions: To the best of our knowledge, this is the first paper to compare pulmonary function tests in hemodialysis patients that being worked up for kidney transplant with their first-degree relatives who were worked up as their kidney donors. The findings of the present study demonstrated that volume overload is closely associated with restrictive and obstructive respiratory abnormalities where respiratory function tests in patients with CKD undergoing dialysis show lower values than those of the general population, and that patients undergoing dialysis have greater impairment of DLCO and FVC than do their first relatives' kidney transplant donor patients. Uremic pulmonary toxicity is likely to be multifactorial and may differ with different patterns of CKD disease.

SUN-201
CHARACTERISTICS OF DIALYSIS AND RENAL
TRANSPLANTATION IN THE KINGDOM
OF SAUDI ARABIA



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Introduction: The Kingdom of Saudi Arabia has an increasing number of patients with end-stage renal disease, with 3 main modalities used to treat this disease mainly by hemodialysis, peritoneal dialysis and kidney transplantation from living and deceased organ donors. Hemodialysis being the most accessible modality of treatment, the kingdom is taking a course of action for better patient management by outsourcing the hemodialysis centers through private-government partnerships with Diaverum and Davita.

Methods: Cross-sectional review of questionnaires filled-out by dialysis centers in the kingdom. 2018 annual report of the Saudi Center for Organ Transplantation.

Results: A total of 20,496 patients were on hemodialysis and peritoneal dialysis in the kingdom. With 271 dialysis centers providing the patient care and services. These Centers were distributed into 5 sectors, the Ministry of Health (MOH) has 48% of the dialysis centers, Government non-MOH with 9%, Private and charitable centers 20%, King Abdullah Hemodialysis Project 2% and the outsourcing dialysis program of the MOH Diaverum and Davita centers with 21%. The dialysis centers distribution per region, Central region has 31%, Western 27%, Eastern 14%, Southern 18% and Northern 10%. Causes of renal failure were mainly due to diabetic nephropathy 41.2%, hypertensive nephropathy 33% and unknown reasons 11%. Prevalence of HCV and HBsAg in hemodialysis patients were 9% and 2.7% respectively. Out of HCV+ve patients, 310 (12%) patients were found to be HCV PCR+ve. The incidence and prevalence rate of patients on dialysis were 167 pmp and 621 pmp respectively. Kidney transplantation accounted from deceased and living donation and transplantation has improved, with a significant increase on living transplantation over the past 10 years. In 2018, 1011 kidneys were transplanted with 31 pmp kidney transplants, of which 86% were from living and 14% from deceased donation.

Conclusions: The kingdom is undergoing a reformation with regards to renal replacement therapy and practices, outsourcing and partnering with private dialysis providers which provides renal care to dialysis patients. Improving the kingdoms kidney transplantation from living and deceased organ donation is also a priority, with the current status of the kingdom of Saudi Arabia being one of the most active in performing living kidney donation in the region, it has also been working to improve the deceased organ donation in the kingdom by setting up a new standard in deceased donor detection, maintenance and follow-up with key performance index (KPI).

SUN-202
EPIDEMIOLOGY OF END STAGE RENAL
DISEASE (ESRD) OF OMAN SINCE 1983 TO 2018:
A SECONDARY DATA ANALYSIS STUDY



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Introduction: Incidence and prevalence of ESRD population for some of nations are regularly well published. Oman's publication on this aspect is limited and therefore this study is made to contributing in publishing this vital data.

Methods: This study is a secondary data analysis for the data obtained from the ESRD register in Oman, and from the Oman annual health reports, and relevant accessible published resources. The main measurements and aim is to identify the incidence and prevalence of Oman's treated ESRD population (1983-2018). The year 1983 is the year when renal care has started in Oman.

Results: The total number of patients registered on the Oman's ESRD register of the central renal dialysis centre (RDC) from 1983 until 2010 was 3,524 ESRD patients distributed for the following treatments' cohorts; haemodialysis, 2,328 patients (66%); kidney transplant, 1,144 patients (32.5%); peritoneal dialysis, 52 patients (1.5%). The prevalence statistics from 1998-2018 showed an overall increase in dialysis treatment in Oman. The dialysis sub/population increased from 35 patients in 1983 to 2,300 patients in 2018. The new patients registered in 1983 were 34 patients, in 1986 were 33, in 2013 were 168, in 2015 were 230, and in 2018 were 350 patients per total population.

Conclusions: The overall results for the incidence and prevalence of Oman's ESRD population showed increase in these figures which agree with the global scenario and ring an alarm to undertake an urgent preventive measure to stop the wild increase of this chronic disease incidence.

SUN-203

CHARACTERISTICS OF THE DIALYSIS TREATED SUB/POPULATION OF THE NORTHERN REGION OF OMAN: A CROSS-SECTIONAL STUDY



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Introduction: There is a paucity of information on the characteristics of dialysis treated sub/population of Oman, therefore it is not known if it had the same characteristics if compared with the same population across the literature.

Methods: This study is a cross-sectional study aiming to describe the dialysis sub/population characteristics in the northern region of Oman. The participants involved were the dialysis treated patients in four dialysis centres in the northern region of Oman (n = 341 patients). The main measurements were patient demographics, co-morbidities, risk factors, impact of dialysis treatment on patient, and death profile.

Results: The average age of this population was 51.7 ± 15.8 (mean ± SD). There were more males (n = 187 = 54.8%) to females (n = 154 = 45.2%). The most common co-morbidities reported by the study participants were hypertension and diabetes combined (n = 156 = 32.4%). Hypertension was the most common risk factor reported frequently by the participants (14.2%). Over 80% of participants reported that dialysis treatment had not caused them stress or worry. The death figures for 2014 and 2015 were 42 and 57 deaths per annum, respectively for the northern region of Oman. The main reported causes of death were cardiovascular diseases (n = 41 = 41.5%) and infection (n = 10 = 10.2%).

Conclusions: The overall results for the sub/population agree with the data of the same sub/population in the Saudi Arabia and in the European countries. This research helped to know the characteristics of sample dialysis population of Oman and so it can map the road for best health plans and services for this sub/population.

SUN-204

APREVALENCE OF METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS AMONG END-STAGE RENAL DISEASE PATIENTS IN THE HAEMODIALYSIS UNIT AT DR. WAHIDDIN SUDIRUOSODO HOSPITAL MAKASSAR, SOUTH SULAWESI – INDONESIA



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Introduction: Prevalence of methicillin-resistant staphylococcus aureus (MRSA) is steadily increasing globally. The present study was conducted to determine the prevalence of MRSA among End-Stage Renal Disease patients in the Haemodialysis unit at Dr. Wahiddin Sudiruhosodo Hospital Makassar, South Sulawesi – Indonesia

Methods: This is a descriptive observational study. Data was obtained from medical records of haemodialysis patients in Wahiddin Sudiruhosodo Hospital Makassar from January 2017 – December 2017. The statistical analysis carried out was the calculation of proportion and confidence interval (CI)

Results: The total number of dialysis patients was 671. The mean age was 49.07 ± 13.66 years consisted of males 378 (56.3%) and females 293 (43.7%). There were 18 patients (2.7%; 95% CI: 1.5%-3.9%) of 671 dialysis patients infected by MRSA. The median age of haemodialysis patients with MRSA was 49 (18-69) years, males 9 (50%) and females 9 (50%).

Figure 1. Subjects Distribution

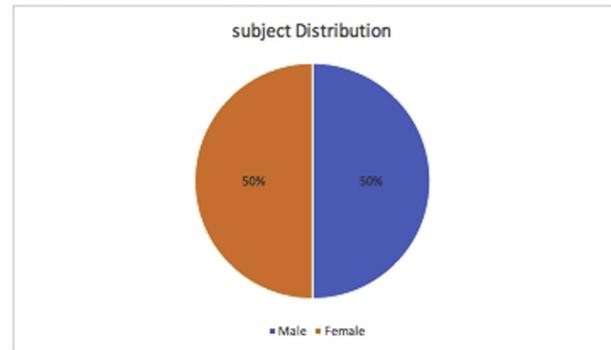


Figure 2. Proportion of subjects MRSA in Dialysis Patients

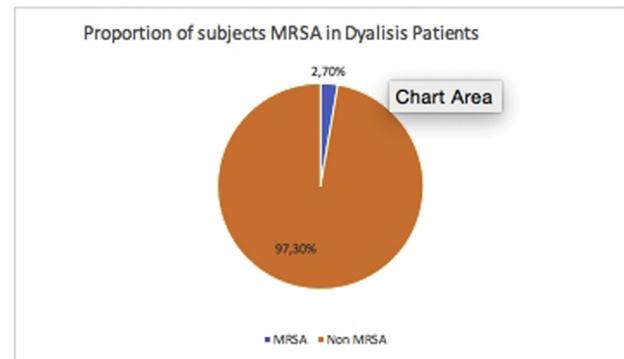
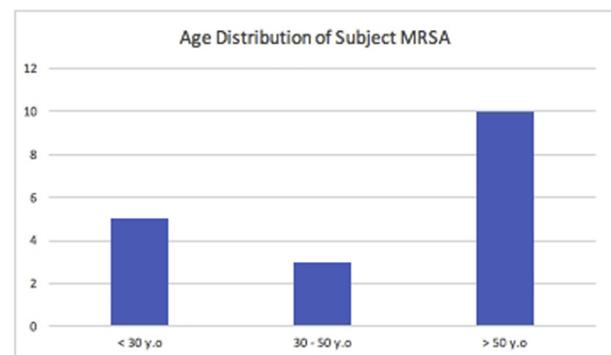


Table 1. Age Distribution of Subjects MRSA



Conclusions: The prevalence of MRSA colonization among End-Stage Renal Disease patients in the Haemodialysis unit at Wahiddin Sudiruhosodo Hospital Makassar, South Sulawesi – Indonesia is 2.7%