Introduction

- Incidence rates of end-stage renal disease (ESRD) have steadily increased in adults since 1980, and disproportionately affect racial minorities.
- However, few studies have assessed the trends within the pediatric population. The purpose of this study was to characterize trends in the incidence of ESRD in a national cohort of pediatric patients in different racial and ethnic groups.

Methods

- Retrospective analysis of US Incident ESRD patients aged 0-19.
- The data were obtained from the United States Renal Data System (USRDS) database, enrollment file and CMS 2728 Medical Evidence Form.
- Incident rates per million population were calculated for pediatric patients by age, race and gender for the years 1980 to 2007.
- Primary cause of ESRD is determined from diagnosis codes on the CMS 2728 Medical Evidence Form.

Results

- There were a total of 29,287 incident cases during the study period, 73% for patients aged 0-14, and 40% for those aged 15-19.
- There were a total of 29,287 incident ESRD patients aged 0-19.
- Rates for those with focal segmental glomerulosclerosis as a primary cause of pediatric ESRD are low and have remained relatively constant over time.
- Rates for those with diabetes as a primary cause of pediatric ESRD have increased markedly since the 1980s.
- Rates for those with focal segmental glomerulosclerosis as a cause of pediatric ESRD have increased markedly since the 1980s.
- There does not appear to be an increase in the incidence of ESRD due to type II diabetes.
- The incidence of ESRD due to FSGN has almost doubled over the last 20 years.

Conclusion

- Since 1997, significant increases in ESRD incidence rates have occurred in Asians aged 0-14 and in Hispanics aged 15-19.
- Rates for those with diabetes as a primary cause of pediatric ESRD are low and have remained relatively constant over time.
- Rates for those with focal segmental glomerulosclerosis as a cause of pediatric ESRD have increased markedly since the 1980s.
- Age, racial, and ethnic disparities exist in U.S. pediatric ESRD incidence rates.
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