INTRODUCTION

Chronic renal disease (CRD) is a common health problem resulting from loss of kidney function. Diabetes and high blood pressure are the most common causes for its occurrence. The number of patients with CRD in China is estimated to be approximately 119.5 million. A cross sectional survey of a nationally representative sample of Chinese adults demonstrated that the prevalence of CRD varied widely among geographic regions, with an overall prevalence of 10.8%. The prevalence in China is slightly higher compared to developing populations as well as the United States (4.4% for 2005-2010) and the United Kingdom (8.5%).

The burden of CRD is not restricted to its effect on demands for renal replacement therapy, the disease has other major effects on the overall population. Both, in general population and, in high-risk risk groups, kidney involvement affects mortality and cardiovascular events. Rapid increase in the prevalence of risk factors such as diabetes, hypertension, and obesity could result in an even greater burden of chronic kidney disease in the future, and is likely to have substantial socioeconomic and public health consequences in resource-poor countries.

The present comprehensive literature review was conducted to collate the published evidence evaluating economic implications of CRD with and without co-morbid diabetes mellitus in China. A systematic literature search was conducted from January 2005 to March 2014 to identify relevant English language studies assessing CRD with and without co-morbid diabetes mellitus in China.

METHODS

A systematic literature search of Embase® and MEDLINE® databases was conducted from January 2005 to March 2014 to identify relevant English language studies assessing CRD with and without co-morbid diabetes mellitus in China.

RESULTS

A total of 5 citations (CRD [n=3] and CRD with co-morbid diabetes [n=2]) out of 134 citations met the pre-defined inclusion criteria and were utilized for data extraction (Figure 2).

CONCLUSIONS

Progression of chronic renal disease with or without co-morbid diabetes drives substantial medical care costs in China. Total medical expenditures for treating CRD were considerably greater for patients with associated diabetic complications compared to those without such complications. Reviewing the studies on economic aspects presented higher costs for hemodialysis compared to peritoneal dialysis in China. However, this literature review has certain limitations in terms of a small number of English language studies retrieved from the searches. As CRD prevalence continues to grow in Chinese society in the coming years, future research in CRD should be usefully directed towards analysing the economic consequences for better management of the increase in societal and direct medical costs.

REFERENCES

6. Chanan N, Mangat GS. Economic burden of hemodialysis (HD) and continuous ambulatory peritoneal dialysis (CAPD) for patients with end stage renal disease was assessed by Zhang and colleagues. To establish cost-effective treatment modalities from Chinese societal perspective. It was observed that patients undergoing HD incurred higher costs relative to those undergoing CAPD (Table 1).

Table 1. Annual costs of hemodialysis and peritoneal dialysis in China (cost year: 2010)

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Costs</th>
<th>HD</th>
<th>CAPD</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Indirect costs</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Total</td>
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Source: Zhang 2010

ECONOMIC IMPLICATIONS OF CHRONIC RENAL DISEASE WITH AND WITHOUT CO-MORBID DIABETES IN CHINA, POST-2005

A retrospective study was conducted by Xiaoming and colleagues to compare the cost-effectiveness of 372 patients on renal transplantation (RTx) with 92 patients on modality (HD) for at least 3 years in northwestern China between March 2007 and February 2008. The results indicated lower costs of RTx compared to HD from second year onwards (Figure 4).