Introduction

- A pragmatic review (GSK study LS3178) was conducted to better understand the association between systemic lupus erythematosus (SLE), lupus nephritis (LN), and end-stage renal disease (ESRD) as well as the degree of severity and the transitions between severity states, risk factors, laboratory predictors of disease progression, and overall disease progression.

- A pragmatic review method was chosen in order to develop an overall picture of the available information as well as any gaps in the literature, with a view to addressing more specific questions in the future.

Methods

- Literature search and data extraction
  - A keyword-based literature search was conducted using PubMed, Google, and Google Scholar and supplemented with a bibliography search relevant to the focus area.
  - Publications were screened and prioritized for inclusion high quality, published after 2010; addressed a topic of focus or an information gap; data were from the USA or Europe (high-quality pre-2010 and non-USA/Europe publications were permitted).

- Data on renal symptoms prior to LN diagnosis were limited; in general, worsening renal signs and symptoms were indicated in most of the studies as the primary reason for biopsy.

- Data on time to progression within LN were scarce, most likely because transformation to proliferative lesions is common and can occur rapidly.

- Limitations: This review did not address patient experience of nephritis, nor did it assess the proportion of patients with Class III (as these are not biopsied) or the extent to which progression to Class III/IV could be delayed through treatment.

Results

- Literature screening and selection are shown in Figure 1.

- An overview of the results is provided in Figure 2.

- Figure 1. Literature screening metrics
  - Keyword-based search: n=577
  - Full-text screened: n=248
  - Excluded: n=104
  - Full-text screened: n=541
  - Excluded: n=131
  - Full-text screened: n=71
  - Excluded: n=18
  - Full-text screened: n=63
  - Excluded: n=13

- Conducted in Asia: n=5
  - Conducted in Europe: n=10
  - Conducted in USA: n=1
  - Conducted in Argentina: n=1
  - Conducted in Egypt: n=1
  - Conducted in South Africa: n=1
  - Conducted in multiple countries: n=2

- Figure 2. Mapping of disease progression from SLE to LN and ESRD
  - LN diagnosis: 7–26%
  - SLE diagnosis: 31–48%
  - LN progression: 10–25%
  - Progression to ESRD: 5–30%
  - Limited information on the evolution of renal parameters prior to LN diagnosis.

- Conducted in Argentina
  - Retrospective
  - n=16

- Concluded in 15 years

- Conducted in Europe
  - Retrospective
  - n=40

- Conducted in USA
  - Retrospective
  - n=5

- Conducted in Egypt
  - Retrospective
  - n=3

- Conducted in South Africa
  - Retrospective
  - n=3

- Conducted in multiple countries
  - Retrospective
  - n=1

Conclusions

- Early diagnosis and management of LN are important to delay progression.

- Male patients, patients of non-white race, and patients of a younger age at SLE diagnosis were at higher risk of developing LN and progressing from SLE/LN to ESRD.

- When LN develops, it usually does so soon after SLE diagnosis, transformation to proliferative lesions is common and can occur rapidly.

- Limitations: This review did not address patient experience of nephritis, nor did it assess the proportion of patients with Class III (as these are not biopsied) or the extent to which progression to Class III/IV could be delayed through treatment.

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Disclosures

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