FSGS- New Insights

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Focal segmental glomerulosclerosis (FSGS) is the term used for both the lesion and a disease. Numerous causes are recognized, including circulating factors, not yet identified, infections, drugs, genetic mutations, and secondary to other diseases which cause kidney scarring. Morphologic findings may also provide additional information to distinguish possible prognosis of idiopathic FSGS. Our proposed FSGS classification is hierarchical and based on the recognition that multiple phenotypes of sclerosis may exist in the same biopsy. The not otherwise specified variant is the most common, and classified as such by default. The overriding "trump" card is collapsing glomerulopathy, diagnosed when at least one glomerulus shows collapsing features. Cellular variant of FSGS is diagnosed when there is endocapillary hypercellularity, in the absence of a tip lesion, which is diagnosed when the segmental adhesion or cellularity is limited to the periphery of the glomerulus and involves the proximal tubular pole in at least one glomerulus. Hilar variant is diagnosed when the sclerosis in most of the affected glomeruli is localized at the hilum. The collapsing variant has worse prognosis, tip lesion has best prognosis, and the cellular lesion is distinctly different from the tip lesion in terms of its prognosis, supporting that this classification could provide additional information of importance for stratifying patients for optimal treatment. New insights into the interaction and possible response of glomerular epithelial cells to injury have also emerged. Parietal epithelial cells may move to the tuft, and participate in sclerosis, or act as stem cells for podocytes. Studies of markers of varying stages of differentiation of these cells may aid in diagnosis and understanding of pathogenesis of various FSGS lesions. In sum, the term FSGS encompasses a variety of lesions. Morphologic variants may provide additional information of importance for prognosis.