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Is Kidney Biopsy Necessary to Diagnose IgA Nephropathy in Children?

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The diagnosis of IgA nephropathy is confirmed by kidney biopsy, with immunofluorescence staining demonstrating the presence of dominant deposition of IgA, because there are no specific laboratory findings that can be used to confirm the diagnosis of IgA nephropathy. Although not every patient needs a kidney biopsy to diagnose IgA nephropathy, patients with proteinuria or impaired renal function may require a kidney biopsy (1) to determine the correct (accurate) underlying cause of the disease, (2) to assess the extent (severity) of the disease, helping predict disease progression and outcomes, and (3) to allow clinicians to tailor treatment strategies based on the specific underlying pathology. However, there are various kinds of complications of renal biopsy. Although rare, complications such as bleeding, infection, pain and damage to surrounding structures may occur. In addition, the small tissue sample obtained by renal biopsy may not always represent the entire kidney pathology. Clinicians should weigh these advantages against potential risks and limitations. However, there is a need to scientifically consider whether renal biopsy is really necessary procedure in children. First, when a patient has proteinuria, does the treatment differ depending on the pathological findings? Second, does treatment vary depending on the severity of the pathological findings of IgA nephropathy? If proteinuria is severe but the pathological findings are mild, should we treat it mildly? Third, it should be considered whether complications of renal biopsy are underestimated in both adults and children. Most complication studies are retrospective rather than prospective, and serious complications including deaths might have not well been reported. In conclusion, it seems important to accurately and sufficiently explain the advantages and disadvantages/risks of renal biopsy to the patient's guardians before making a decision.

Keywords: IgA Nephropathy, Children, Kidney Biopsy, Treatment