

عنوان مقاله:

Appraisal of Electron Microscopy Position in the Diagnosis of Minimal Change Disease, A Sixteen-Year Study in Shiraz University of Medical Sciences Affiliated Hospitals

محل انتشار:

بیست و یکمین همایش سالانه و چهارمین همایش بین المللی آسیب شناسی و طب آزمایشگاه و هشتمین همایش بین المللی شاخه ایرانی آکادمی بین المللی پاتولوژی (سال: 1398)

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خلاصه مقاله:

Minimal change disease (MCD) is one of the most common diseases that affect glomerulus and causes nephrotic syndrome. it is the cause of 70-90% of nephrotic syndrome in children. The purpose of this study is to provide clinical and paraclinical information of patients that MCD was proved for them by Electron microscope (EM) and to focus on the value of the EM in the diagnosis in comparison light microscopy (LM). Materials and Methods: In this cross-sectional study, we investigated kidney biopsies which were sent to the referral electron microscope unit (affiliated to Shiraz University of Medical Sciences) from 2001 to 2016. The final diagnosis of Minimal Change disease was based on the EM study. For each patient, primary LM finding was compared with electron microscopy diagnosis. The available patients' demographic, clinical and paraclinical data were extracted. All the statistical analysis was performed in SPSS 19.0 and $p < 0.05$ was considered as statistically significant. Results: Information of 141 patients with approved minimal change disease in electronic microscopy were analyzed in the current study. The mean age of patients was 23.3 ± 17.3 years and most of them were male (53.9%) with a normal BUN (83.0%) and Cr (84.0%). 138 (97.9%) patients had no tubular atrophy and no fibrosis in electronic microscopy. The role of electron microscopy in the diagnosis of minimal change disease for 81 (57.4%) of cases were essential, for 60 (42.6%) cases were helpful and there was no case with the role of Non-necessary. Moreover, the mean number of observed glomeruli was 7.46 ± 4.24 , 15.95 ± 10.25 in EM and LM. 61 (43.3%) patients were children and 80 (56.7%) were adult. The proportion of edema (75.0% versus 59.0%) was significantly higher among adults ($P=0.04$ and $P=0.003$ respectively). Mean number of glomerulus among children was significantly higher in electron ($P=0.002$), light ($P < 0.001$), and Immunofluorescence (IF) ($P=0.002$) microscopy. IF study was performed for 98 (69.5%) patients among them it was negative for 59 cases, followed by IGM with 19 diagnoses. Conclusion: The importance of EM for the diagnosis of MCD is indispensable and undeniable; also, the LM is not capable of independently detecting a certain diagnosis of MCD. Considering the limitations of using EM, the results obtained from this study can help with the appropriate use

کلمات کلیدی:

Microscopy, Electron, Transmission; Nephrotic syndrome; Minimal change disease; Kidney

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