Research paper 4

Evaluating the usefulness of liver biopsies in paediatric liver diseases

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**Introduction:** Novel diagnostic methods in the diagnosis of paediatric liver diseases have developed rapidly, including electron microscopy, imaging, serology, and genetic studies. Nevertheless, conventional diagnostic methods like liver biopsy continue to play a pivotal role.

**Method:** The clinical diagnosis and histological diagnosis of liver biopsies received at Lady Ridgeway Hospital were reviewed during a one-year period beginning from 01st March 2020. These were categorized as: Category 1 - non diagnostic (due to inadequate or unsatisfactory specimens), Category 2 - neither exclude/confirm the clinical diagnosis nor provide prognostic or therapeutic information (e.g. descriptive reports), Category 3 - confirms the clinical diagnosis but does not provide further information such as aetiology, Category 4 - confirms the clinical diagnosis and provides further information important for patient management and Category 5 - changes the clinical diagnosis completely. Thus, categories 1 and 2 were deemed as having no impact on the management of the patient, while categories 3, 4, and 5 were considered as valuable in the management of the patient.

**Results:** There were 61 liver biopsies. No unsatisfactory/inadequate samples were received (Category 1). Only 8.2% (5/61) of the biopsies generated descriptive reports (Category 2). 29% (18/61) liver biopsies confirmed the clinical diagnosis without providing additional information (Category 3) and 42% (26/61) of the biopsies provided further useful information (Category 4). The histology changed the clinical diagnosis in 20% (12/61) of the biopsies (Category 5).

**Conclusion:** 92% (56/61) of the biopsies had a significant impact on the diagnosis and management of paediatric liver diseases.

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