Algorithm for failure to pass meconium since birth in neonates

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It’s important to note that if a newborn doesn’t pass meconium within 48 hours of birth, it could indicate some underlying gastrointestinal tract problems. [1] There are various surgical anomalies such as intestinal atresia, anorectal malformations, meconium ileus, Hirschsprung’s disease, etc. that can cause this issue, often accompanied by other clinical features such as emesis and abdominal distension. [2, 3] It’s crucial to detect these surgical conditions early for prompt and effective intervention, as delayed diagnosis and treatment can have potentially life-threatening consequences. [3]

It is important to diagnose a surgical condition before planning a surgical intervention, particularly in cases where the patient is unable to pass meconium. While it is possible to diagnose such conditions in many cases, the process can be quite complicated and can lead to diagnostic errors, especially for pediatric surgery trainees. To ensure the correct diagnosis and treatment, it is recommended to follow diagnostic guidelines or algorithms. [4] In this regard, we have developed a diagnostic algorithm (Fig. 1) for patients who have been unable to pass meconium since birth. This algorithm can be particularly useful for beginners in pediatric surgery.

Process: A problem-based learning (PBL) session was run in our department on failure to pass meconium. Etiology, diagnostic tools, and management of patients with underlying surgical causes of failure to pass meconium were discussed at length. Three pediatric surgery trainees were tasked to make the algorithm based on the discussion. The initial algorithm was discussed again in the department. Later the algorithm was sent to 5 national and international reviewers and suggested changes were incorporated in the algorithm. Afterward, the algorithm was presented in the local chapter meeting of the Association of Paediatric Surgeons of Pakistan (APSP). Finally, the algorithm was presented in the 26th joint colorectal meeting of APSP and ARM Net & ERN EUROGEN. [5]

The algorithm combines medical history, clinical examination, and simple diagnostic tests to accurately identify potential causes of meconium retention. The purpose of this algorithm is to consolidate current practices into a single flowchart, making it easier for residents and young surgeons to accurately diagnose cases of delayed or non-passage of meconium. It also serves as a platform to help residents and young surgeons refresh their knowledge and avoid missing any differentials when managing a case of failure to pass meconium.

We believe that this algorithm has the potential to significantly improve early detection and resultant management of neonates presenting with a surgical cause of failure to pass meconium. We are using it in three departments of pediatric surgery and soon will be publishing the real-time diagnostic value of this algorithm. We invite pediatric surgeons to use this algorithm and help us improve and improvise it.

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Algorithm Failure to Pass Meconium

Figure 1: Algorithm of failure to pass meconium.

REFERENCES


