Multidisciplinary approach to streamline the diagnosis of patients presenting with an anterior mediastinal mass: One hospital’s experience

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Pediatric patients presenting with an anterior mediastinal mass (AMM) can present with life threatening airway or vascular crisis. Through process improvement strategies, we have come up with an algorithm that has reduced our patients’ mean time from hospital presentation to time of diagnostic biopsy by about 65%. There has been no increase in patient complications since the introduction of this algorithm. In fact, we have eliminated the use of pre-diagnosis radiation and reduced pre-diagnosis intentional steroid administration to reduce mass effect of the AMM. This, in turn, prevented escalation of disease staging from their use. We identified a multidisciplinary group of physician champions/liaisons from surgery, anesthesia and interventional radiology who are first-line contacts when such patients arrived at our hospital. They would assess patients and reconvened with oncologists and if needed, cardiology and or critical care physicians to discuss the next steps to facilitate treatment in a safe and efficient manner. Our algorithm also includes investigations that need to be completed before the team met to decide on the best anesthetic approach to facilitate diagnostic biopsy and other relevant procedures for staging or therapy. This new approach has increased patient safety by having all the correct specialists in the room at the same time (in mostly daylight hours) and avoiding multiple anesthetics or sedation due to poor coordination of resources. We are collecting data regarding time to therapy and length of stay to analyze the impact of the above on these.

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