

## ABSTRACT

Histopathology is very important for the diagnosis of many diseases including cancer. The time between taking specimens and making the results available is called histopathology turnaround time (TAT). TAT is a major quality indicator for histopathology laboratories. Prolonged TAT leads to delay in clinical decision making, increased morbidity, mortality and increased costs to the health systems. Minimizing TAT helps the clinicians to overcome these problems.

This interventional research project evaluated the process of histopathology laboratory of Teaching Hospital, Karapitiya (THK) with a view to identify the current status and potential points of delay in histopathology TAT and to implement appropriate interventions to reduce TAT.

The pre-intervention mean TAT was determined using secondary data extracted from the records of the laboratory and the units sending specimens. Perceptions of ten clinicians on histopathology services and the TAT were obtained by qualitative interviews. The factors associated with and contributing to the delay in histopathology TAT were assessed prospectively for one week using a log sheet for 169 specimens sent to the laboratory.

The intervention for improving histopathology services was designed with the participation of all stakeholders, considering the results of the assessment and feasibility of implementation within a short period. A detailed histopathology request form and a work-time log sheet was introduced. Two months after the intervention, post-intervention TAT was determined.

The pre-intervention mean TAT was 35.6 days (SD=13.3 days; n=169). There was a statistically significant difference between the mean TAT of urgent and non-urgent specimens ( $p < 0.001$ ). Longer mean delays has been observed in two steps of the

process namely, cutting sections after embedding (8.6 days) and slide interpretation by registrars (11.04 days). The clinicians perceived that histopathology TAT is unacceptably long and it results in poor patient outcomes. Their suggestions were considered in designing the intervention.

Post-intervention mean TAT was 30.49 days (SD=12.9; n=179). There was a statistically significant reduction in post-intervention mean histopathology TAT compared to pre-intervention TAT, indicating that the intervention has been effective.

**Key words: Histopathology, Turnaround time, histopathology request form, time log sheet**