

Correlation of intra-operative frozen section consultation with the final diagnosis at a referral center in Karachi, Pakistan

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Abstract

BACKGROUND:

The correlation of intra-operative frozen section diagnosis with final diagnosis on permanent sections is an integral part of quality assurance in surgical pathology laboratories. However, there is scant data on this topic from Pakistan. Similarly, no local study has looked at frozen section turnaround times.

AIMS AND OBJECTIVES:

To analyze indications, discrepancies and deferrals for all frozen sections performed or received at our institution over a 1-year period and to determine the turnaround time for frozen section diagnoses in our cases.

DESIGN:

A retrospective study, was undertaken, of all frozen sections reported at our institution between 1 st January 2006 and 31 st December 2006. The records of these cases were reviewed. The number and types of discrepancies, including sampling and interpretation errors were determined. The deferred cases and causes for deferral were also determined. The turnaround times of all cases were recorded. Agreement rates were calculated as percent agreement, sensitivity/specificity and positive and negative predictive values.

RESULTS:

A total of 356 specimens were received. Out of these, 14 cases (3.93%) were deferred to permanent sections. Of the remaining 342 cases, the discordant diagnostic frequency was 2.92% while the concordant diagnostic frequency was 97.08%. The most common pathological processes encountered were presence/typing of neoplasm (51.12%) and assessment of surgical margins (27.53%). The average turn-around time for frozen section diagnosis was 23 minutes; 60% of the cases were reported in 20 minutes or less.

CONCLUSIONS:

The accuracy of frozen section diagnosis at AKUH pathology department can be interpreted as comparable with most international quality control statistics for frozen sections. The overall error and deferral rates are within the range of previously published errors in pathology. Deferrals and errors in some sub-specialties were higher than in others. The

results suggest specific measures should be taken to reduce the number of discrepancies. The overall goal is to reduce errors, reduce the number of deferrals and improve frozen section diagnosis turnaround times.