

## Is our laboratory waste handling safe? A local study on waste management practices in five tertiary Histopathology laboratories

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**Introduction** Waste generated in histopathology laboratory is unique and proper disposal is mandatory to avoid harmful effects on people and environment. The objective of the present study was to study the current waste management practices in randomly selected five tertiary histopathology laboratories in the Colombo district.

**Methodology** Data was collected by using semi-structured interviewer administered questionnaires, observations and interviewing senior medical laboratory technicians of the labs studied.

### Results

**Segregation** All 5/5(100%) laboratories segregate waste as they generate and use rigid walled containers for sharp waste while 3/5(60%) adopt a colour code system.

**Handling, storage** All 5/5(100%) laboratories have no trained personnel for handling waste. Waste handlers of 2/5(40%) use disposable gloves and 3/5(60%) do not use any PPE (Personnel Protective Equipment). All 5/5(100%) have a separate place for waste storage with only 2/5(40%) having limited access.

### *Disposal*

#### ***Pathological waste***

Fixed specimens: 3/5(60%) laboratories incinerate, 2/5(40%) use land filling.

Body fluids: 2/5(40%) discard treated (autoclaving, 1% sodium hypochlorite) fluid to a separate drainage system, 1/5(20%) incinerate with containers, 1/5(20%) discard to normal drainage system without any treatment and 1/5(20%) doesn't handle fluid.

**Chemical waste**(fixatives, dehydrating agents, clearing agents, stains etc): Majority(60%) directly pour all chemicals into normal laboratory sink mixed with running tap water without any treatment, 2/5(40%) have separate drainage system for chemicals and 1/5(20%) has special drainage system for formalin and xylene.

**Sharps and Glass slides:** 4/5(80%) incinerate and 1/5(20%) landfills.

**Paraffin blocks:** 2/5(40%)incinerate, 1/5(20%) ues landfills, 1/5(20%) sends through general waste and 1/5(20%) did not have a specific practice.

**General waste:** 3/5(60%) send to municipal waste and 2/5(40%) burn openly.

**Conclusion** Of the tertiary histopathology laboratories 60% had universally accepted practices with regard to disposal of pathological waste, sharps and glass slides and general waste. Management of chemical waste and paraffin blocks were not satisfactory in majority of the five centres assessed.