

## CORRESPONDENCE

### Prevention of long crystal formation in myeloperoxidase staining

Myeloperoxidase should be demonstrated in the specific granules of myeloid lineage cells. From our experience, using the method of Kaplow' which uses drops of reagents instead of precise volumes, long crystal or "needle" formation occurred in the cells (Fig 1a). Therefore, we have undertaken to determine the parameters that result in "needle" - formation and the precise volume of reagents to use to avoid this phenomenon. Peripheral blood smears were stained with different concentrations of hydrogen peroxide ( $H_2O_2$ ) (10-100 ul of 30%  $H_2O_2$ , mixed with 10ml distilled water). 25 ul of the diluted  $H_2O_2$ , was mixed with 5ml of the Kaplow's peroxidase reagent. Three different reaction times (40, 50 and 60 seconds) were tested. To achieve strong staining intensity without "needle" - formation, we found that the optimal concentration was 45 ul of  $H_2O_2$ , and the reaction time was 60 seconds. We stained 20 random smears and found that no "needle" - formation occurred (Fig.1b).

Suet-Feung CHIN, Bsc (Hons.), Soon-Keng CHEONG, FRCP, FRCPA

*Haematology Unit, Department of Pathology. Faculty of Medicine. Universiti Kebangsaan Malaysia.*

## REFERENCES

1. Kaplow LS. Simplified myeloperoxidase stain using benzidine dihydrochloride. *Blood* 1965; 26: 215.

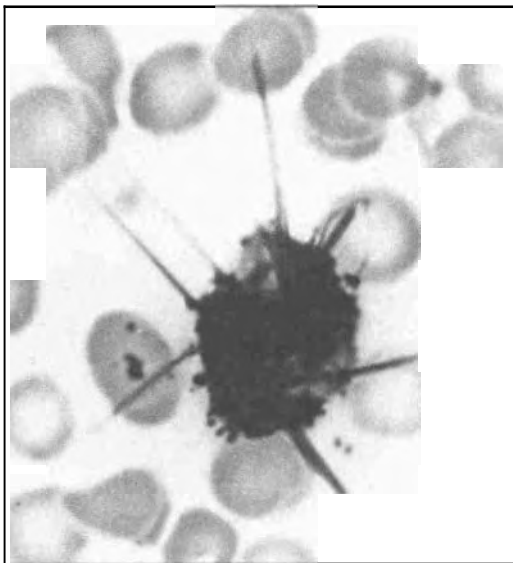


FIG. 1a: Long crystal formation or "needles" in myeloperoxidase positive cells using the drops protocol.

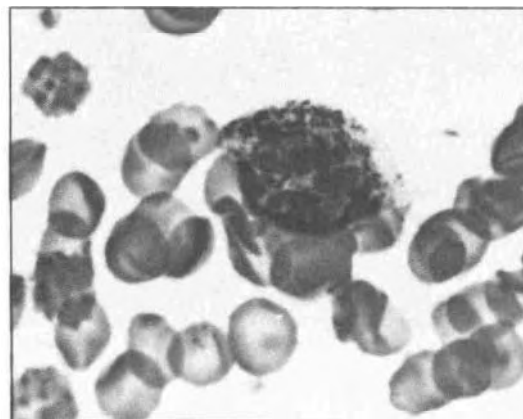


FIG. 1b: Granules in myeloperoxidase positive cells stained with 45 ul of  $H_2O_2$  for 60 seconds.