suggesting that membrane structure (and perhaps function) in this area differs from that at the periphery of the cell. The interior of the cell, which seems to be clearly distinct from the membrane, displays an orderly network of filamentary material, with looping and irregular beading of the filaments.

These appearances suggest that the internal structure consists of a combination of haemoglobin and stroma. If this interpretation is correct, it would support the view which has received much discussion and speculation[8] that haemoglobin is bound to stromatin fibrils and that this binding supplies a semi-rigid framework which maintains the biconcave shape of the cell. The red cells from a patient with sickle-cell disease showed a different structural pattern, suggesting a disorganization of the stromatin-haemoglobin framework, and this finding would indicate that the ion-etch effect is not an artefact. Though the method requires further careful standardization to allow more precise interpretation of the observed features, the combination of ion-etching and scanning electron-microscopy provides another useful approach to the study of cells in general and of the red blood cell in particular.

Concealed Unnatural Death

How many murders go undetected? How many people commit suicide without anyone knowing? How many accidental deaths are passed off as natural? These are questions often asked of forensic pathologists and are surprisingly difficult to answer.

A recent survey of 28,000 coroners' necropsies performed by the London Hospital Department of Forensic Medicine[1] over a five-year period goes some way towards providing some of the answers. 5,000 of the 28,000 deaths were unnatural, and most of these were recognized to be so from the outset. The survey concentrates on 263 deaths that were not recognized as being unnatural before the necropsy. The greatest proportion of them (104 cases) were the result of previously unsuspected barbiturate poisoning. The overdosage was usually suicidal, sometimes accidental, but never shown to be homicidal. In fact, no instance of homicidal poisoning was found in this survey, but this is hardly surprising. Murder by poisoning is rare. The next largest group of the 263 were 53 deaths from accidental carbon monoxide poisoning. The hazards of incomplete combustion of paraffin and gas appliances are very real. The fact that ten deaths every year from this cause are recognized at necropsy in one part of London points to the importance of renewed measures to combat these preventable tragedies. It also holds a lesson for the clinician inasmuch as carbon monoxide poisoning should always seriously be considered in the differential diagnosis of coma, even in the absence of history of exposure to the gas. The finding of 34 deaths from unrecognized head injury is no surprise, for the lack of correlation between external injuries and intracranial damage is well known. Seventeen "battered babies" and nine criminal abortions points to the low "suspicion level" of many doctors. One unsuspected murder of an adult by asphyxia was discovered. The minimal signs described in this case emphasized the importance of the skill and experience in forensic pathology required by a coroner's pathologist.

Perhaps the chief lesson to be learned from the London Hospital survey is the importance of necropsies in all deaths in which the cause is not clearly manifest, and the necessity for properly trained pathologists with adequate backing from a toxicological laboratory. At present the provision for forensic pathology varies greatly from one part of the country to another. The Home Office provides an efficient forensic science service but takes virtually no part in organizing the medical aspects of the investigation of crime or potential crime. Universities and medical schools are increasingly being forced to point out that the expense of a forensic pathology service should not be a call on their already strained resources. The London Hospital department's 28,000 necropsies represent a total approximate annual income of £37,000 at present rates of coroners' fees, but departmental earnings of this magnitude can be possible in only a few parts of Great Britain.

Five years ago, partly in response to pressure from the medical profession, a Home Office departmental committee was set up under the chairmanship of Mr. Norman Brodrick, Q.C.,[2] to inquire into "(*a*) the law and practice relating to the issue of medical certificates of the cause of death, and for the disposal of dead bodies, and (*b*) the law and practice relating to coroners and coroners' courts, the reporting of deaths to the coroner, and related matters; and to recommend what changes are desirable." The committee still has not reported, and whatever reforms it suggests will presumably take time to carry out. In the meantime skilled forensic pathologists are retiring or leaving the subject for lack of professional satisfaction and incentives, and few new specialists are being trained in the subject. We are facing a rapid decline in the standards of our forensic pathology services: it may have already begun.

Leprosy in East Africa

A year ago a useful seminar on mycobacterial diseases was held in Dar-es-Salaam, Tanzania, under the auspices of the East African Medical Research Council. The participants came not only from Kenya, Tanzania, and Uganda but also from neighbouring African countries and from Great Britain and Holland. For the first time medical workers from remote hospitals in East Africa were able to meet together to discuss their common problems in tackling the leprosy endemic. They agreed that in the populations they served leprosy was a disease of serious proportions, that more extensive control measures were urgently needed, and that an East African Leprosy Association should be formed.

Meanwhile, the first issue of the *East African Leprosy Bulletin* has appeared under the editorship of Dr. A. R. H. B. Verhagen. Its main goal is to publish papers on applied research and the practical aspects of treating leprosy in East Africa. Among the subjects discussed in the present number are the management of leprosy reactions, the choice of drugs, and the social problems facing sufferers from the disease. This move to bridge the gap between new knowledge and its application is welcome. Both the association and the *Bulletin* deserve the good wishes and co-operation of everyone concerned with the treatment of this disease. The inclusion of leprosy in both undergraduate and postgraduate teaching courses at Makerere in Kampala is a commendable innovation and one worth following in other medical schools in the tropics.

[1] Johnson, H.R.M. *Medicine, Science and the Law*, 1969, **9**, 102.
[2] Brodrick, N., *British Medical Journal*, 1965, **1**, 1499.