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FOREWORD

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Date

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INTRODUCTION

The objective of this project is to seek, review, identify, and retrieve repository materials (slides, blocks, wet tissues, and information) of cases fulfilling the CDC definition of AIDS in the absence of demonstrable HIV infection. These cases could then be used in basic research of the chronology of HIV retroviral infection in human tissue. To meet this objective, the AFIP's master database in the mainframe computer was searched for cases accessioned before 1970 with any diagnosis indicative of immunodeficiency in the absence of proven HIV infection (MMWR, August 14, 1987/VOL. 36/No. 1S -- revised MMWR, 1992/41:1-19). Case selection criteria used: clinical, pathological, and demographic information available for correlation with pathological diagnoses, geographic origin, anatomic source, patient's age, and known risk factors demonstrated to influence the spread and distribution of HIV infection and AIDS.

BODY

Cases were transferred onto a floppy disk and imported into a custom-designed database for additional analysis at the Division of AIDS Pathology. Cases with adequate materials and sufficient clinical documentation were identified and retrieved for review at the AIDS Pathology Division. Records from cases accessioned before 1970 were reviewed manually for entry into the study database. Records on microfilm were scanned into digitized images and, when possible, translated into word processing files for conversion into other suitable formats for import into database records. We have developed and implemented a simplified and more practical approach to data retrieval from the AFIP mainframe computer for importation into personal computer workstations, thereby maximizing efficiency in reviewing and retrieving pathological material that is suitable for collaborative research in all aspects of pathology and basic science and potentially usable by other AFIP investigators.

The implementation phase, Phase I, was completed three years ago. This consisted of outlining the infrastructure requirements, technical support requirements, and purchasing hardware and software. Phase II, preliminary identification of possible AIDS cases using CDC criteria for identification in the absence of HIV testing was completed last year. Phase III was completed in 1997 and consisted of making materials available for research and study, from the oldest cases in the Institute that have a high probability of being AIDS. The schema for meeting this goal is outlined in Attachment A. During the past year the Division of AIDS, AFIP and the Division of Retrovirology at WRAIR have determined the appropriate methodology and randomly selected 10 control cases to be tested with the two p24 positive cases. Testing will be done in-house at WRAIR laboratories in Rockville.

CONCLUSIONS

Identifying possible AIDS related cases from among the Institute's oldest materials can be very useful. A systematic approach which narrows the scope of identification to those cases that are the most likely candidates is complete. Probable cases of AIDS were identified by this search and review. We are presently waiting for a decision to be made, in collaboration with the U.S. Army Retroviral Group, to determine the optimal use of the material. Possibilities include PCR and/or in situ testing for the presence of HIV viruses and viral sequencing. The materials have been reaccessioned using a computer generated random identification technique. This will insure a double-blind protocol.

Search Schema

1. Some modification to the CDC criteria was made in order to further restrict the initial search to those cases most likely to actually be AIDS (e.g. Kaposi's sarcoma other than extremities).
2. Accession numbers for cases meeting the search criteria are identified.
3. Clinical and pathologic microfilm reports for the oldest cases are screened, and cases that have no relevance eliminated.
4. Pathology materials are requested for those remaining cases.
5. Materials are reviewed and irrelevant cases eliminated.
6. Materials are made available for further study.