has been made available to CAMSI in the rental fees. Therefore, the National Executive has been empowered to make arrangements through the National Film Board to obtain medical films to be shown before the respective medical undergraduate societies, and the total rental charges for these will be borne by the CAMSI Treasury up to $315 per year. It is hoped that CAMSI and the medical faculties can thus work together to provide a curriculum enriched by the benefits of greater visual reinforcement.

Grants.—One of the more progressive resolutions made at this conference was that the National Executive shall appoint a committee to investigate endowment plans, and shall draft a CAMSI plan with a view toward establishing a CAMSI scholarship on every medical campus.

COMMENT

The Tenth Annual Conference of the CAMSI was, we feel, a success in every sense of the word. Twenty-eight students and interns representative of the medical schools from all Canada sat at the Conference table for approximately ten hours a day for four days, discussing common problems and attempting to reach possible solutions. A mental and spiritual union was achieved by this group which will prove an inspiration to us all. The world's plan of education has been mostly priestly—men have striven to inculcate trust and reverence. Men have cited authorities and quoted precedents and given examples: it was a matter of memory, but the whole spiritual acreage was left untilled. A race educated in this way cannot advance, save as it is jolted out of its notions by men with either a sublime ignorance of, or an indifference to, what has been done and said. True education can come only through doing things, making things, going without things, talking about things.

Youth lays great plans, is always in revolt against the present order, groups itself in bands and swears eternal fealty; and life, which is change, usually dissipates the plans, subdues the revolt into conformity, and the sworn friendships generally fade away into dull indifference. The aims of the CAMSI are for true education, and we are typical idealistic youth. It is, however, our hope and sincere belief that we can and will achieve our goals and provide a real contribution in all things medical and sociological in Canada. We know that this can be done because for the first time an active attempt is being made to bridge the gap which has always existed between the lives and thoughts of each generation. Now youth can lay its plans for the future with more serious thought, knowing that these plans need not be set aside but may be incorporated into the scheme of things as they are now and shall be in the future.

SYLVIA J. ONESTI, *National Secretary, CAMSI*

CLINICAL and LABORATORY NOTES

ACID-FAST BACILLI IN PARAFFIN SECTIONS OF TUBERCULOUS TISSUE*

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The demonstration of tubercle bacilli in histological sections of tuberculous tissue by recognized methods is difficult. Findings are usually negative in material known to be tuberculous. Hence relatively few laboratories carry out the acid-fast staining of sections even in special cases.

Sole reliance for diagnosis in the absence of culture is placed on the presence or absence of the typical tubercle formation. Yet typical epithelioid tubercles are not always present in tuberculous tissue and it must be recalled that the first response to virulent infection may be a polymorphonuclear neutrophilic one. Moreover, it is well known that, in tissue containing typical tubercles, there may also be large areas of inflammatory reaction which taken alone could not be identified as tuberculosis. Such areas are frequently encountered by themselves in the small specimens necessitated by aspiration and other types of biopsy.

There has been, thus, a real need for development of a simple rapid method for staining acid-fast organisms in just such instances.

It was, therefore, with much enthusiasm that phthisiologists and pathologists in general noted the recent report of Tilden and Tanaka[1] on their experience with a staining technique first described by Fite.[2] These authors confirmed that the new staining was highly reliable in demonstrating acid-fast bacilli in tissue and they were able to modify the technique so as to reduce the staining time from twenty-four hours, as originally described, to about one-half an hour.

The details of the actual staining are as follows (the sections being cut and mounted, etc., as for routine histological work):

	Solution	*Time*
1.	0.5 g. "new fuchsin" 5.0 g. phenol 10 c.c. ethyl alcohol Water to 100 c.c.	5 mins.
2.	40% formalin	5 mins.
3.	Acid alcohol	5 mins.
4.	1% $KMnO_4$	2-5 mins.
5.	2% oxalic acid	30 secs.
6.	Harris hæmatoxylin	2-5 mins.
7.	Acid fuchsin 0.01 g. Picric acid 0.5 g. Water to 100 c.c.	5 mins.

Each of the above steps is preceded by a brief washing in water.

The original article by Tilden and Tanaka, as well as that of Fite, should be consulted as to purity of reagents and details of preparation of solutions.

* From the Laboratories of the Mountain Sanatorium, Hamilton, Ontario.

The purpose of this communication is to present our own findings in regard to the efficiency of the new staining procedure in detecting tubercle bacilli in 100 instances of known tuberculous tissues.

The material selected for study consisted of autopsy, surgical and biopsy specimens. It was always believed to be tuberculous, either by reason of histological appearance, by cultural procedures, or because of the presence of generalized tuberculosis in that particular patient. In the case of autopsies, not more than three or four tissues were examined from any one case so as to be certain of studying more varied types of disease. The number of individual patients involved altogether was 56. There were 37 autopsies, 10 surgically treated cases, 1 obstetrical case, and 8 on whom biopsy had been performed. The organs involved were:

Tissue	*No. of specimens*
Lungs	53
Lymph glands	12
Kidneys	9
Intestines	6
Liver	3
Spleen	3
Sinuses	2
Adrenal	1
Appendix	1
Brain	1
Bronchus	1
Epididymis	1
Knee Joint	1
Peritoneum	1
Placenta	1
Subcutaneous tissue	1
Unidentified	3

The results were most encouraging, for 93 of the 100 tissues were found to contain acid-fast organisms. One tissue gave a doubtful result. Six seemed to contain no organisms. Details of these six were as follows:

1. This tissue was placenta. The H. and E. section on re-examination did not appear tuberculous histologically and the specimen probably should not have been selected as one of the series.

2. This was a kidney surgically removed from a case of proved renal tuberculosis. H. and E. section revealed the presence of some necrotic material well surrounded by fibrous tissue and lymphocytes. Epithelioid cells and giant cells were rare. It is believed that the healing process was well advanced in this instance.

3. This was a lymph gland from a postmortem on an individual who had far advanced chronic tuberculosis. Restudy of the Fite's stained sections showed that there was no histological evidence of tuberculosis in these particular sections.

4. This was a lymph gland from autopsy material submitted from another institution. At time of writing details of this case are not available. Histologically, it appeared to be tuberculous.

5. The identity of this tissue was not established, although it was thought to be lymph gland. Histologically it appeared tuberculous and the case itself was one of clear-cut massive bilateral early tuberculous bronchopneumonia.

6. The tissue in this instance was lung. Histologically only very slight evidence of tuberculosis was noted in this section, the case being predominantly one of renal tuberculosis.

It is to be noted that, although blocks were recut once if found negative, really vigorous search for organisms was not made, since the object was to approximate the treatment which tissues would likely receive in a busy routine laboratory rather than in a research institute.

The above findings confirm and extend the observations of Fite and of Tilden and Tanaka. It is believed that the introduction of the new technique applied to biopsy material will assist greatly in the detection of obscure tuberculosis in many instances. It has, therefore, now been adopted as routine for this type of work at the Mountain Sanatorium, Hamilton.

Experiments to restudy the distribution of tubercle bacilli in cavity walls and elsewhere, using this new and more sensitive method for their demonstration, are at present being planned.

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ANTI-RETICULAR CYTOTOXIC SERUM (ACS)

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Various investigators in Russia have claimed that small doses of an "anti-reticular cytotoxic serum" (ACS) stimulate mesenchymal cells, while reversely, large doses have a paralyzing effect, the mesenchymal cells, according to theory, being the most important reparative cells in the body. ACS is usually prepared by immunizing an animal (sheep, goat, donkey or horse) with antigen taken from the spleen and rib marrow of a human cadaver, in patients who have died within ten hours from some other cause than an infectious or malignant disease. Theoretically the connective tissue is supposed to possess the following functions:[1] (1) A trophic function which regulates cellular metabolism. (2) A plastic function which aids in the regeneration of tissue. (3) A protective function by phagocytosis. (4) An autoregulative function through various internal secretions. (5) A mechanical function of assisting the osseous system.

ACS has been used in Russia with claimed success in highly diversified conditions. It is stated that small doses 0.05 to 0.1 c.c. stimulate the function of the connective tissue and large doses inhibit it; also that the earliest effects, as a rule after the second injection, consist of a lymphocytosis, dilation of the capillaries and increased permeability of the "hæmato-parenchymal barrier". Following its correct dosage