

MEDICINE

Bone Cancer Successfully Treated With Arsenic

A NEW CASE of successful treatment by means of colloidal arsenic of a patient suffering from cancer of the bone is reported in the *Canadian Medical Association Journal*.

The report is by Dr. A. C. Hendrick, Toronto surgeon, and Dr. E. F. Burton, professor of physics at the University of Toronto. The statement follows an announcement by the same investigators in 1931 to the effect that they had successfully treated four persons affected with bone tumor by means of injections of a colloidal solution of arsenic metal.

Details of the latest case are contained in a two-page history, which include X-ray photographs depicting the bone repair following the injections.

The patient was a married woman 22 years of age, affected with a cancerous condition of the thigh above the knee. She was first seen in November, 1930, when both bones and muscles were involved. High voltage X-ray treatment was commenced, but the condition did not improve. The thigh bone finally fractured.

Radiation was discontinued in July, 1931, when the first doses of arsenic were given. An X-ray picture the fol-

lowing October showed that the fracture had re-united. Three months later, the tumor had receded still more, and repair of the limb with new bone lime became apparent on the X-ray plates.

Examination of the patient's lungs last November showed that no secondary cancerous growths had occurred. This fact is considered of importance in view of the rapid course which the disease ordinarily runs. Usually, fragments of a bone sarcoma growth are distributed by the blood stream and produce tumors in other parts of the body. The report says of the patient's present condition:

"She is in good health, free from pain, and is carrying on her usual household duties."

Of the four cases treated in 1931, two are still alive.

Medical aspects of the research were handled by Dr. Hendrick. Dr. Burton was responsible for the preparation of the colloidal arsenic medicine, a delicate laboratory procedure.

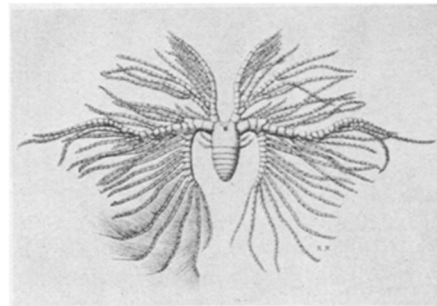
Dr. G. E. Richards, associate in radiology at the University of Toronto, who has been in close touch with the work since its inception, made this comment:

"It must be remembered that cases of bone sarcoma have also been cured in the past by means of surgery, X-rays and radium. This new case with arsenic treatment is of definite interest because for the first time the results are well authenticated and fully reported. I am entirely satisfied with the diagnosis.

"Too many conclusions, however, should not be drawn from a single case, but if the arsenic treatment does no more than relieve pain, and eliminate the need for drugs, it will still be a great boon. The final test will come when there are many more cases, all carefully controlled and thoroughly checked, just as is necessary with any other new clinical treatment."

The indications are that colloidal arsenic will find its greatest use in cases of advanced bone sarcoma. The colloidal solution is now being given a large scale trial in the Toronto general hospital, from which later developments may be expected.

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SOFT-SHELL TRILOBITE?

PALEONTOLOGY

Puzzling Fossils May Have Been Soft-Shell Trilobites

LACE CRABS, strange, delicately-constructed fossil creatures that lived in the primal seas half a billion years ago, may have been merely the "soft-shell" stages of trilobites, extinct relatives of lobsters and crayfish that dominated the waters of that epoch.

This new solution for an old riddle of geology has been suggested by Dr. Rudolf Ruedemann of the New York State Museum. Working with a specially constructed microscope, Dr. Ruedemann has found evidences that the "lace crabs" had shed an outer shell, as lobsters and crabs shed their shells today. In this "soft-shell" stage they looked like creatures of an entirely different order, with wide-apart eyes on their unprotected heads, and the delicate lacy limbs that have given this fossil group its name.

The principal deposits of "lace crabs" have been found in fine-grained shales, hardened out of the mud into which the unprotected moulting trilobites settled for shelter while their new shells were forming, and where many of them were trapped and killed by pockets of water over-charged with carbonic acid.

The "lace crabs" were first described by the late Dr. Charles D. Walcott, secretary of the Smithsonian Institution. Dr. Ruedemann's suggestion that they were "soft-shell" trilobites is set forth in a recent Smithsonian publication.

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(less than -200°C), might be unstable at earth temperatures and they would thus be unknown here. The indications are that Jupiter contains ammonia gas in considerable amounts. Saturn, weaker in ammonia, seems to show methane. The outer planets have other absorp-

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