

Kids hospital treats mummies too

Djemaetesankh is without question the oldest patient to enter Toronto's Hospital for Sick Children.

When X-rayed by the hospital's whole-body computer-assisted tomography (CT) scan, Djemaetesankh was about 2,700 years old. For the past 70 years or so she has been in the Royal Ontario Museum (ROM).

Dr. Derek Harwood-Nash, radiologist-in-chief at the Hospital, said CT scans of Djemaetesankh were the first ever reported of a mummy within its casing. Mummies, including Djemaetesankh herself, have been subjected to conventional X-rays, which could not show much detail.

Layer at a time

In tomography, an object is X-rayed in layers or slices by focusing on one plane at a time in such a way that details in other planes are excluded.

Computerized tomography makes lightning calculations from measurements from many slices taken in rapid succession to build a picture of the whole with finer detail than ever achieved by X-ray before.

One "slice" for example taken at the hip level shows an internal organ, probably the uterus, and outlines the pelvic bones and the bones of the young woman's small hands as they rested in death on her abdomen.

Nicholas Millet, a curator in the ROM's Egyptian department, said he wanted to know if the mummy was deteriorating and what objects were inside the casing with the body.

Decomposition is still possible even with a mummy that has survived thousands of years. If that happened, the mummy would have to be removed, autopsied and disposed of.

Otherwise, it can ruin the casing which is beautiful and also provides information of archaeological interest, Dr. Millet said. Djemaetesankh was found to be in good health.

Dr. Millet said Djemaetesankh's name means "the goddess Mae-et has said that she will live" — probably reflecting her parents' fears in days when countless babies died at or soon after birth.

Dr. Millet said the scans showed that the coffin contained three objects, probably gold, and possibly a jewel.

A rectangular plate covers the incision



Fragile coffin of Djemaetesankh would have been damaged if opened, instead contents were examined by computerized tomography.

in the left side of her abdomen made by the embalmer to remove the intestines. The Egyptian embalmers removed internal organs (except the heart) from the chest and abdomen for separate embalming before wrapping and returning them to the body cavity.

The incision was covered with a plate of metal or wax imprinted with a symbol representing the eye of Horus.

A scarab, about two inches long, rests over Djemaetesankh's heart while an amulet, probably of a vulture or possibly of a scarab with wings, lies on her chest — a "poor man's version" of the magnificent amulet that lay upon the breast of Tutankhamen, said Dr. Millet.

Dr. Harwood-Nash said "an educated guess" from what the X-rays reveal of the texture and structure of her bones suggests that Djemaetesankh was in her late teens or early twenties "in exceptionally good health".

Dr. Millet said the coffin was quite fragile and would have been seriously damaged had it been opened. It is made of a kind of "primitive fibreglass", called cartonnage, made by winding linen sheets saturated in an adhesive over a hollow wooden mould.

Revolutionary engine

Gilles Léveillé, a 39-year-old resident of Drummondville, Quebec, believes he has invented a revolutionary electrically-powered engine.

Although his invention is four years old, Mr. Léveillé wanted to carry out all the necessary tests before making his discovery known. He has applied for a patent, and his agents have told him that no product in Canada or the United States is comparable to his invention.

Mr. Léveillé's new engine operates on six twelve-volt car batteries which produce about 80 amperes. With this source of power in a car, Mr. Léveillé says that he has obtained the following results:

- a range of about 1,120 kilometres (current experimental vehicles do not go beyond 160 kilometres);
- more rapid acceleration than in conventional cars (the wheels do not tend to turn on themselves, he says, but the front of the car has a tendency to lift);
- speeds very easily reaching the limits authorized on highways (100 km/h);
- electrical recharging of the battery at a tiny fraction of the cost of a tank of gas.