

French A-bomb testing aftermath

Le Canard Enchaîné, a French satirical weekly newspaper, recently published a story on the struggle of Yvette Quatrefages, the widow of a veteran who served at the Reggane Nuclear base in the Algerian Sahara in the 1960s. For the past six years she has been trying to uncover the circumstances that may have led to her husband's illness and eventual death from throat cancer in 1988. Yvette Quatrefages now believes that Regis Quatrefages' cancer might have been caused by irradiation resulting from the accidental explosion of a plutonium tank at the nuclear test site at Reggane, in June 1962.

Although there are no official records, according to various sources such as reports from Commissariat à l'Énergie Atomique (the government agency in charge of nuclear energy), documents from the French Embassy, as well as articles in the press, show that between 1960 and 1966 France conducted four atmospheric tests in the Reggane region and thirteen underground tests in the Hoggar region south-east of Reggane. Surprisingly, it seems that the nuclear tests continued even after Algeria became independent in 1962.

Based on eyewitness reports by draftees and secret military documents, Brigitte Rossigneux, author of the article in *Le Canard Enchaîné*, is convinced that at least three serious accidents occurred in 1962. On April 19, the explosion of the plutonium tank at the Reggane site caused the death of several soldiers. Nineteen others were evacuated to a military hospital in the outskirts of Paris. On 1 May that same year, the explosion of an underground nuclear test was not contained and a radioactive cloud reportedly 'fell' on the soldiers and dignitaries present at the Hoggar site, which included Pierre Messmer and Gaston Pawelski, who were at the time ministers in the government of president Charles de Gaulle. Pawelski, who died of leukaemia in 1986, was convinced that the accident was responsible for his disease.

Regis Quatrefages and the six other draftees were reportedly near a second plutonium tank when it exploded at the Reggane site on 28 June, 1962. They were sent to the Percy Military Hospital near Paris where records, to which Rossigneux has had access, attest that Regis Quatrefages

was admitted for "suspicion of internal radioactive contamination."

International Physicians for the Prevention of Nuclear War (IPPNW), which took up the issue three years ago when the United States made its files on nuclear testing public, was not surprised by the new evidence published in *Le Canard Enchaîné*. Abraham Behar, a specialist in nuclear medicine working at the Hôpital de l'Hôtel-Dieu in Paris, and president of the French branch of the organization, is convinced that the report is trustworthy.

Using information gathered from military hospitals, Behar estimates that somewhere between ten and twenty people may have died at the time of the accidents, and that probably many more died later if you count those suffering from the delayed effects of contamination some 20 or 30 years later. But, Behar claims, in addition to accidental exposure, there were also deliberate acts of irradiation by the French army who, he says, used draftees to determine the effects of radiation on humans.

Support for this view, he says, can be found in books written by Messmer, then armed forces minister, and by physicist Yves Rocard, the developer of the French atom bomb — who were both eyewitnesses. However, neither openly criticized the way things were done in the Sahara.

Moreover, in 1985, the Algerian television accused France of having used 150 Algerian prisoners as guinea pigs at the test sites during the 1960s, although the information was never confirmed. At the behest of the Algerian authorities, officials from the French branch of IPPNW were due to visit the region but the trip was postponed due to political unrest in the country.

François Leotard, the present armed forces minister, has recently made some medical files public but only the case histories of civilian personnel who worked at the nuclear tests sites at Muro-roa in French Polynesia during the 1970s.

For the French government, however, the soldiers' plight is still a sensitive issue. Since her article was published, Rossigneux says that she has received countless testimonies from veterans or their families.

CATHERINE TASTEMAIN
Paris

India clamps down on illicit organ trade

Foreigners with renal failure can no longer hope to fly to India for a cheap and quick kidney transplant. Trading in human organs has been banned under a new law that came into force on 4 February.

The legislation expressly forbids the transplantation of kidneys from a live donor unless the donor and recipient are blood-relatives. In other words, unscrupulous doctors and their agents will not be able legally to lure poor people to sell their kidneys. The unauthorized removal of organs and their sale or purchase will now be punishable with fines and imprisonment.

However, to make organs available for transplants the legal definition of death has been revised to bring it in line with the concept of brain-stem death. So, the law will enable surgeons in certified hospitals to remove organs from individuals declared brain-dead — with prior written consent from the patient or the next of kin — and from unclaimed bodies in prisons and hospitals.

The parliament passed this legislation seven months ago but recently put the law into effect after the break-up of a kidney racket late January in Bangalore. The Bangalore police arrested four prominent doctors, who were charged with removing kidneys from at least 1,000 people during the past two years.

"It is a great relief that the act is now in force and we hope it will be implemented properly," said Shahjilal Tamboli, president of the Indian Society of Organ Transplantation, who crusaded against the illicit trade in human organs. Some doctors, however, say the new law will simply drive the kidney trade further underground or 'overseas'.

Harsha Jauhari, a surgeon at the Ganga Ram Hospital in Delhi is also concerned, that such stringent measures will bring the transplantation programme to a grinding halt now that the option of using unrelated donors has been eliminated. Delhi's largest hospital has fewer than 10 cases of brain-death a month: the estimated annual demand for kidney transplants in India is 80,000.

K. S. JAYARAMAN
New Delhi