

Ramses V

Earliest known victim?

by Donald R. Hopkins



(Photo WHO)



Finally, there he was: Live Horus, Mighty Bull, Repulser of Millions, Golden Horus, Sovereign, Protector of Egypt, King of Upper and Lower Egypt, Lord of the Two Lands, Son of Re, Ramses V, Pharaoh. After a long flight from Atlanta, Georgia, USA, and a restless night, I had reached the culmination of a three-year-long quest. Permission had finally been granted for me to collect and examine specimens from the mummy of the Pharaoh Ramses V for scientific evidence that would prove he had died of smallpox. Standing in the Mummy Room of the Cairo Museum, I was almost too excited to take photographs.

Soon after it was discovered in 1898, the mummy of Ramses V, who died in 1157 BC, was recognized as bearing evidence of a rash which resembled smallpox. According to Dr C. W. Dixon, this Pharaoh died of "an acute illness at the age of forty". But it was the rash on Ramses' embalmed and shrouded corpse that made it probable that he had died of smallpox.

Previous electron-microscopic studies of non-royal Egyptian mummies by Dr Peter K. Lewin, of the Hospital for Sick Children in Toronto, Canada, and others had revealed sub-cellular structures in some rehydrated tissues with extraordinary clarity. Now there was a new project, to see if there were poxviruses that could still be recognized in the skin of the ancient Pharaoh. Besides Dr Lewin and myself, it was undertaken by Dr Erskine Palmer and Dr James Nakano of the Center for Disease Control's Special Viral Diagnostic Branch and Viral Exanthems Branch, Professor Mourad A. Sherif of Cairo's Ain Shams Faculty of Medicine, and others.

By special permission of President Anwar el-Sadat,

Professor Sherif and I were allowed to examine Ramses V's mummy on 8 November 1979. Since this is one of the best preserved royal mummies in the Cairo Museum, museum authorities were understandably reluctant to permit us to actually cut a piece of skin containing one or more of the apparent blisters or pustules. Instead, we collected tiny pieces of skin on the shroud.

On examining the front of the mummy from the waist up, we saw a rash of yellowish blisters or pustules, each of between one to five mm in diameter. The rash is most striking over the lower face, neck, and shoulders, and is also visible on the arms, but there is no rash on the chest and upper part of the abdomen. Earlier photographs, published by G. Elliot Smith, show that the rash is also prominent on the lower part of the abdomen and scrotum. We could not see the palms and soles. Despite the limited areas accessible for inspection, the rash is quite striking and is remarkably similar to smallpox.

Electron-microscopic studies of the pieces of skin we obtained did not reveal evidence of poxvirus. Intact layers of skin and cells were clearly visible in some sections. Thus, the specimens examined appear to be of normal intervening skin rather than of directly affected skin. Ordinarily, the virus is concentrated in the pustules, blisters or scabs of smallpox victims. Other immunologic and virologic studies also did not yield the hoped-for clear evidence of variola virus.

But our failure to see poxvirus in these specimens obviously does not mean that Ramses V did not die of smallpox. And after seeing at first hand the rash on this remarkable mummy, I am almost as convinced that he did indeed have smallpox as if I had actually seen a 3000-year-old poxvirus. ■



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