

PRIMATOLOGY Too Old for Her Age

Premature aging in a Japanese monkey.

Progeroid syndromes are a series of syndromes in humans, which cause the extraordinary early onset and rapid progress of aging-like bodily changes. In Kyoto University's Primate Research Institute, my colleagues and I suspected that an infant female Japanese monkey, nicknamed *Shiwako* (meaning “the girl with wrinkles”) was suffering from this syndrome due to her unusual appearance. Upon examining *Shiwako*, we found several symptoms which are common to progeroid patients, such as certain physical characteristics (e.g. bilateral cataracts), metabolic disorders (e.g. an elevated level of hemoglobin A1c [HbA1c]), and cellular features (e.g. deoxyribonucleic acid [DNA] repair deficiency). However, a genetic analysis found no notable mutation in the known progeroid-related genes. We are engaged in further analyses to elucidate the cause of her phenotype. It is anticipated that these studies will shed light on both the mechanism of normal aging and on that of progeroid syndromes.



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Shiwako and a MRI image of her head