

Overlapped landslides in the Chigou landslide area, Shimane Peninsula, Japan

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Landslide tends to occur repeatedly in general, and therefore thick surface deposits of brecciated materials cover widely the landslide area. Therefore, surface landsliding is strongly influenced by such loose deposits and direction of slopes rather than geological structures of bedrock. Chigou landslide area, which is located in the northern coast of the Shimane Peninsula, is one of such landslides.

Some of past moving were estimated on the basis of detail field survey including discrimination of various volcanic rocks and pyroclastic rocks of the Miocene. As the results, two types of landslides, shallow and deep ones are distinguished in the area. They are overlapped each other in the same extent. The former is sliding within surface deposits, whereas the latter is bedrock. Moreover, although the direction of movements may depend on loose sediments and down slopes in the former, it may rather depend on geologic structures in the latter.

A small characteristic structure was found along the coastal cliff composed of alternation of sandstone and mudstones. Some of the strata are brecciated, and the facies changes gradually from bedrock to breccias. A sharp and closed fold with a dipped axial plane means that this structure is a result of the lateral movement of bedrocks along bedding planes. NW-SE axis of the structure indicates that deep sliding has moved northeastward. This is concordant with the geologic structures of bedrocks in the area.