

Sandstone dikes within pelagic cherts of the Permian Yoshii Group in Southwest Japan and its deformation structure

*Tsuyoshi Ito¹, Atsushi Matsuoka²

1.Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences, 2.Department of Geology, Faculty of Science, Niigata University

Deformation structure of consolidated cherts would record its diagenetic process. The Akiyoshi terrane, which is a Permian accretionary complex of the Inner Zone of Southwest Japan, contains Permian cherts. However, there are a few studies that have described the deformation structure of the Permian cherts of the Akiyoshi terrane. The Yoshii Group, distributed over west Okayama Prefecture, belongs to the Akiyoshi terrane.

We discovered ductilely- and brittlely-deformed chert blocks within sandstone dikes of the Yoshii Group in the Mihara area. The ductilely-deformed chert blocks and the clay minerals within the sandstone dikes are elongated and have slightly preferred orientation.

Pseudoalbaillella sp. cf. *P. longtanensis* Sheng et Wang was obtained from a chert bed just below the sandstone dike. *Pseudoalbaillella longtanensis* is characteristic species of the *P. longtanensis* Assemblage-Zone corresponding tentatively to the Kungurian (Cisuralian: Lower Permian).

The presence of the ductilely-deformed cherts suggests that the siliceous deposits had yet been unconsolidated when the sandstone dikes intruded. The sandstone dikes might be originated in terrigenous clastic, which is a component of chert-clastic sequences of the Yoshii Group in the Mihara area. The Permian chert had kept unconsolidated more than 10 My in this case.

Keywords: ductile deformation, Permian, radiolaria, pelagic chert, sandstone dike, Akiyoshi terrane