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The characteristics of rockfall and accident on Mount Fuji

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Among the mass wasting on mountains, rockfall is general phenomena. These events in active volcanic area, including small slope failures are common, even if that is at quiet interval period. Nevertheless, in the case of Japan which disaster prevention measures around roads and settlements have been applied, rockfall phenomenon is recognized as affairs of other people. On the other hand, in the well developed country in terms of tourism and mountaineering business, actual risk of rockfall to the peoples will be high, if they enter to mountain areas without knowledge of landslide hazard.

In the Japanese mountain sightseeing route and trail, most accident-prone area by rockfall is Shirouma-daisekkei (Nagano Prefecture), then Mt. Fuji (Shizuoka and Yamanashi Prefecture). Besides, the most deadly accident occurred at Yoshida-osawa valley in Mt. Fuji in 1980. In spite of descending route was closed after the 1980 tragedy, fatal and injury rockfall accident almost every year. Furthermore, in the last seven years, more than 300,000 visitors passed through the 8th station (EL. 3500 m) of Mt. Fuji in every year. Hence, detail study for prior incidents of rockfall and possible danger area along the trail are required.

The past cases in rockfall accident were collected and studied based on newspaper, mountain journals and police reports. The following characteristics were revealed,

- major accidents have been occurring between the 8th station and the summit on all four mountain route (trail from Fujiyoshida/Subashiri, Fujinomiya and Gotenba)
- most of the accidents were recorded in the end of July to the middle of August
- temporal trend of occurrence time of the day is obscure
- human-induced rockfall is prone to occur from descending person or at descending route.
- the sources of regular rockfalls are cracky lava or weak agglutinated rock. A rock face with open crack near the summit of the Fujinomiya route seems to be ready to fall down. The location of present route should be shifted to elsewhere.

Keywords: mountaineering, mountain tourism, agglutinate, human-Induced rackfall, quiet interval, case study