Pigmentation of basal cell carcinoma is inversely associated with tumor aggressiveness in Asian patients

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**Background:** Previous studies have addressed the predominance of pigmented basal cell carcinomas (BCCs) in the Asian population.

**Objective:** We sought to determine the subclinical infiltration of BCCs according to the semi-quantitative assessment of pigmentation.

**Method:** We retrospectively investigated 219 patients with 225 primary BCCs who underwent Mohs micrographic surgery (MMS) between January 2004 and June 2017. The pigmentation was calculated as the percentage of the sum of the pigmentary area over the total tumor surface area. Subclinical infiltration was assessed by the number of required MMS stages.

**Results:** BCCs with smaller pigmentary areas required higher MMS stages and presented as more aggressive histological subtypes. Upon investigation of the factors affecting subclinical infiltration, the pigmentary areas of the tumor surface (P=0.005), tumor size (P=0.025) and aggressive histological subtypes (P<0.001) were independently associated with the MMS stage. After adjusting for the effect of histological subtypes and tumor size, the amount of pigmentation was clearly associated with lesser subclinical infiltration.

**Limitation:** Retrospective, single-center design.

**Conclusion:** BCCs with a smaller extent of pigmentation tend to exhibit greater subclinical infiltration and a more aggressive histologic growth pattern. Pigmentation should be considered a clinical predictor for the histologically favorable BCCs in the Asian population.

**Biography**

Hye-Rim Moon has graduated from Ulsan University College of Medicine and completed her PhD at the age of 31 years from same University. She is the clinical assistant professor of Department of Dermatology, Korea University Asan Hospital. She has published more than 15 papers in dermatologic field and has been serving as member of Korean Dermatological Association.

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