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ABSTRACTS

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Association of Gallbladder Polyp Size With Obesity and With Malignant Potential

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Background: Several epidemiologic studies have reported an association between obesity and development of gallbladder polyps. The size range of gallbladder polyps associated with obesity has not yet been documented. Polyp size is recognized as an important risk factor for malignancy, with polyps larger than 1 cm in diameter considered more likely to be cancerous and cause for intervention. Recently, a long-term follow-up study in Korea identified 8 mm as a better cut-off point to identify potentially neoplastic polyps. Gallbladder polyps < 5 mm in diameter on abdominal ultrasonography are commonly indistinguishable from gallstones associated with obesity. Thus, we investigated risk factors of gallbladder polyps > 5 mm in size on abdominal ultrasonography.

Methods: From January 2003 to August 2007, retrospective cross-sectional research was carried out using data from the Korean Association of Health Promotion on patients who underwent abdominal ultrasonography. Exclusion criteria included age < 20 years, non-Asian ethnicity, and previous cholecystectomy. A total of 5,278 patients (3,163 men and 2,115 women) identified as having gallbladder polyps were randomly age- and gender-matched in a 1:4 ratio with 21,112 otherwise healthy controls (12,652 men and 8,460 women). The odds ratio (OR) and *P* value of independent risk factors were calculated using conditional logistic regression models.

Results: A total of 26,390 cases were included in this analysis. Overall, the presence of gallbladder polyps was positively associated with obesity (OR 1.107, *P* = .011) and gallstones (OR 1.459, *P* < .001). In a subgroup analysis, the OR of obesity (body mass index ≥ 25 kg/m²) was 1.178 for people with polyps from 5 to 8 mm in diameter (*P* = .043), and 0.813 for polyps ≥ 8 mm in diameter (*P* =

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.235). The OR of gallstones was 1.089 when gallbladder polyps were 5 to 8 mm ($P = .663$) and 2.654 when polyps measured ≥ 8 mm ($P = .002$).

Conclusion: Gallbladder polyps that are 5 to 8 mm in diameter are associated with obesity; however, the risk of malignancy associated with polyps this size is relatively small. On the other hand, people with gallstones are at high risk of having gallbladder polyps larger than 8 mm and are therefore at higher risk for malignancy.