

Gallbladder Diseases in India

Editorial

Khan M

School of Medicine, University of Dammam, Dammam, Saudi Arabia.

Gallbladder diseases are a relatively common disorder in most part of the world. The overall prevalence of the gallstone disease in the United States and much of the Western Europe is between 10 and 20 percent [1, 2]. In either sex, the prevalence increases with age. Throughout the world, gallbladder diseases are predominantly a female disease.

In India too, the gallstone disease is relatively common with an overall prevalence in the order of 10-20 per cent [3] and predominantly a female disease [4, 5]. The findings of the study reported in this issue of the journal by Gaharwar, et al., [6] are no different.

There is a clear North-South divide (commoner in the North) in the burden of gallbladder diseases in India, a phenomenon which is poorly understood [5, 6-8]. This may not be explained on the basis of possible differences in diets and food habits [3, 9, 10]. Gallstones can be induced easily by dietary manipulations in laboratory animals, but for human subjects, there is no such thing as lithogenic diet or food [3]. Diabetes mellitus, a recognized risk factor of gallbladder disease [3], is more prevalent in the Southern India [11]. There is an urban-rural instead of North-South divide in the burden of obesity in India [12].

The site of the study reported by Gaharwar, et al., [6] was Uttar Pradesh, Northern India. The authors histologically examined total 132 gallbladder samples obtained at cholecystectomy. They have found microscopic features considered abnormal in all samples tested. Gallstones, mostly mixed stones (89%), were found in 129(97.7%) cases. Pigment stone was not found in any case. Histological features of chronic cholecystitis were found in 101(76.52 %) cases. Varieties of other abnormal mucosal changes (e.g., atrophy, hyperplasia, or atrophy-hyperplasia) in all cases. The study presented by Gaharwar, et al., [6] is a hospital-based, retrospective study. The sample size is small. Despite this, its findings again raise an age-old question whether there is any truly innocent gallstone [13].

Although absolute the number is not large, India has one of

highest incidence of gallbladder carcinoma of the world [14, 15]. Gallstone diseases are most likely play a major role [15, 16]. India still has a considerable burden of typhoid fever [17]. Chronic gallbladder carrier state of *Salmonella typhi* is an important risk factor of gallstones. Almost nine out of ten such carriers have gallstones [18, 19]. Furthermore, the gallbladder carrier state of *S. typhi*, both with and without the development of gallstones has been suspected as the crucial predisposing factor for the pathogenesis of gallbladder carcinoma [20, 21]. This is further strengthened by the detection of the DNA of *S. typhi* in the tissue samples of gallbladder carcinoma obtained in indigenous Indian patients and its absence from such tissue samples obtained in indigenous Dutch patients [15]. A recent study has also advanced the biological plausibility of the putative role *S. typhi* in the pathogenesis of gallbladder carcinoma [15]. Future studies in India should address this issue by testing systematically the tissue samples of the gallbladder obtained at biopsies, surgery or autopsies using molecular techniques [22].

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***Corresponding Author:**

Dr. Mohammad Khan
School of Medicine, University of Dammam, Dammam, Saudi Arabia.
E-mail: Khan.mohammad2016@yandex.com

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