

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].

References

- Behari A, Kapoor VK (2012) Asymptomatic gallstones (AsGS) - To treat or not to? Indian J Surg. 74 (1): 4-12. doi: 10.1007/s12262-011-0376-5.
- Aerts R, Penninck F (2003) The burden of gallstone disease in Europe. Aliment Pharmacol Ther. 18 (Suppl. 3): 49-53.
- Stinton LM, Shaffer EA (2012) Epidemiology of gallbladder disease: Cholelithiasis and cancer. Gut Liver. 6(2):172-187. doi: 10.5009/gnl.2012.6.2.172.
- Khuroo MS, Mahajan R, Zargar SA, Javid G, Sapru S (1989) Prevalence of biliary tract disease in India: a sonographic study in adult population in Kashmir. Gut. 30(2): 201-205.
- Unisa S, et al., (2011) Population-based study to estimate prevalence and determine risk factors of gallbladder diseases in the rural Gangetic basin of North India. HPB.13(2): 117-125.,doi: 10.1111/j.1477-2574.2010.00255.x.
- Gaharwar A, Mishra SR, Kumar V (2016) Histomorphological spectra of gall bladder specimens after cholecystectomy in benign diseases. Int J Anat Appl Physiol. 2(5): 49-56.
- Mathur AV (2015) Need for Prophylactic cholecystectomy in silent gall stones in North India. Indian J Surg Oncol. 6(3): 251-255. doi: 10.1007/s13193-015-0418-8.
- Sangwan MK, et al., (2015) Gallstone disease menacing rural population in north India: a retrospective study of 576 cases in a rural hospital. Int Surg J. 2(4): 487-491. doi: 10.18203/2349-2902.isj20150916.
- Tseng M, et al., (1999) Dietary intake and gallbladder disease: A review.

*Corresponding Author:

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

Received: September 01, 2016

Published: September 07, 2016

Citation: Khan M (2016) Gallbladder Diseases in India. Int J Anat Appl Physiol. 2(1e), 1-2. doi: <http://dx.doi.org/10.19070/2572-7451-160002e>

Copyright: Khan M© 2016. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited.

- Public Health Nutr. 2(2):161-172.
- [10]. Nagaraj SK, Kumar MK, Muninarayanappa S, Anantharamaiah H (2012) Risk factors and the biochemical evaluation of biliary calculi in rural Kolar District, Karnataka. *J Clin Diagn Res.* 6(3): 364-368.
- [11]. Mitra A, Basu B, Mukherjee S(2009) Significance of different dietary habits in sections of Indian diabetics. *J Hum Ecol.* 26(2): 89-98.
- [12]. Pradeepa R, et al., (2015) Prevalence of generalized & abdominal obesity in urban & rural India-the ICMR-INDIAB study (phase-I) [ICMR-INDIAB-3]. *Indian J Med Res.* 142(2): 139-150.
- [13]. Mayo WJ (1911) Innocent gall-stones: A myth. *JAMA.* LIV(14): 1021-1024.
- [14]. Randi G, Franceschi S, La Vecchia C (2006) Gallbladder cancer worldwide: geographical distribution and risk factors. *Int J Cancer.* 118(7): 1591-1602.
- [15]. Scanu T, et al., (2015) Salmonella manipulation of host signaling pathways provokes cellular transformation associated with gallbladder carcinoma. *Cell Host Microbe.* 17(6): 763-774. doi: 10.1016/j.chom.2015.05.002.
- [16]. Zatonski WA, et al., (1997) Epidemiologic aspects of gallbladder cancer: a case-control study of the SEARCH Program of the International Agency for Research on Cancer. *J.Natl. Cancer. Inst.* 89(15): 1132-1138.
- [17]. Sivaji I, Duraisamy S, Balakrishnan S, Periasamy S (2015) A prevalence study of typhoid fever and convalescent phase asymptomatic typhoid carriers among the schoolchildren in the northern part of Tamil Nadu. *J Pub Health.* 23(6): 373-378.
- [18]. Schiøler H, Christiansen ED, Hoybye G, Rasmussen SN, Greibe J (1983) Biliary calculi in chronic Salmonella carriers and healthy controls: a controlled study. *Scand J Infect Dis.* 15(1): 17-19.
- [19]. Karaki K, Matsubara Y (1984) Surgical treatment of chronic biliary typhoid and paratyphoid carriers. *Nippon Shokakibyo Gakkai Zasshi.* 81(12): 2978-2985.
- [20]. Shukla VK, Singh H, Pandey M, Upadhyay SK, Nath G (2000) Carcinoma of the gallbladder is it a sequel of typhoid? *Dig Dis Sci.* 45(5): 900-903.
- [21]. Nath G, et al., (2008) Association of carcinoma of the gallbladder with typhoid carriage in a typhoid endemic area using nested PCR. *J Infect Dev Ctries.* 2(4): 302-307.
- [22]. Lovane L, et al., (2016) Carriage prevalence of Salmonella enterica serotype Typhi in gallbladders of adult autopsy cases from Mozambique. *J Infect Dev Ctries.* 10(4): 410-412. doi: 10.3855/jidc.7306.