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Original Research Article

Erectile Dysfunction in Men with Gallbladder Stone Disease

Dr. Mubarik Saiyyad[1] (Assoc. Prof.), Dr. Udit Narang[2] (Junior Resident) & Dr. Anukriti Roy[3] (Junior Resident) & Dr. Amit Katlana[4] (Prof. & HOD)

Dept. of General Surgery, Index Medical College Hospital & Research Centre, Indore, M.P.[1,2,3&4]

Corresponding Author: Dr. Udit Narang

Abstract

Background & Methods: The aim of the study is to assess Erectile Dysfunction in Men with Gallbladder Stone Disease. Men without a history of cholelithiasis or erectile dysfunction, including psychogenic and organic erectile dysfunction, the index date was assigned based on the date for the diagnosis of gallbladder stone disease in the study, and one male beneficiary without gallbladder stone disease was frequency-matched with each male patient in the gallbladder stone disease

Results: We found 23% in patients & Maximum Comorbidity was found in Hypertension 41% followed by Coronary artery disease i.e. 23%. The chi-square statistic is 3.0525. The *p*-value is .040611. The result is significant at $p < .05$.

Conclusion: Significant deficiencies in the evidence base of erectile dysfunction with gallstone disease and as a result most guidelines are associated with a low level of evidence and lack consensus. Focused high quality research is needed to definitively address the knowledge gaps in the diagnosis and management of erectile dysfunction gallstone disease. Ultimately, when focused research is completed updated guidelines should be developed by multidisciplinary team, and then well implemented with endorsement by a wide range of medical and surgical societies. This will contribute to a decrease in practice variation and improve patient care.

Keywords: erectile, dysfunction, gallbladder & stone.

Study Design: Observational Study.

1. INTRODUCTION

Reproduction is one of the three essentials, along with food and air, to sustain life. Sexual activity as part of reproduction and as intimate expression is an integral part of existence for all cultures[1]. Sadly, difficulty functioning in this capacity is common and the source of anguish for many men and their partners. Erectile dysfunction affects about half of the male population at least once in their lifetime. In both biomedicine and Chinese medicine there has long been interest in the function and disease of the male reproductive organ[2].

Erectile dysfunction is often synonymous with Kidney yang deficiency in the minds of many western TCM practitioners. The purpose of this article therefore is to demonstrate that one of the typically overlooked patterns of erectile dysfunction is disharmony of the Gall Bladder.

It is important to recognise however, that while this article focuses upon the Gall Bladder in relation to erectile dysfunction, there is vast intercommunication between the zangfu[3]. Therefore, the recognition of the interconnectiveness in the zangfu system and how each

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zangfu can influence the other reminds the practitioner to see a disease pattern as a disorder of the primary organ and its organ interconnections.

The generally accepted definition of erectile dysfunction is dissatisfaction with size, rigidity or duration of erection. A more concise definition of erectile dysfunction is "difficulty achieving and/or maintaining an erection". The aetiology of erectile dysfunction may be physical or psychological/relational in origin[4]. Typically, the aetiology varies by age group, with psychological or primary organic disorders (including congenital) being presented by patients between adolescence and the third decade. It is commonly found that patients in their sixth decade present with what they describe as physical problems that are often identified as relational problems. Those patients presenting with physical disorders are often in their seventh and eighth decade. In the latter age group, sexual dysfunction is often under-reported[5-6].

Gallstones occur commonly in the western world. Most are asymptomatic, but still, gallstone disease contributes substantially to health care costs, and its complications are sometimes life threatening. In the US, more than 700000 cholecystectomies are performed each year. Hospitalisation due to gallstone disease and its resulting complications costs more than five billion dollar, each year in the US only. The prevalence differs not only between countries but also between ethnic groups. Age and gender also influence the prevalence of gallstone disease.

2. MATERIAL AND METHODS

The study was observational study, which was for 01 Year on 100 patients, in a tertiary care hospital. It was recorded all patients, both inpatient and outpatient, who present with abdominal pain, were referred to the Radiology Department for abdominal ultrasonography. Using a pre-designed standard tool, data such as age, gender, presence or absence of GBS, size of GBS, and number of GBS identified were collected from each patient's copy of abdominal ultrasound report.

Men with a history of organic or psychogenic erectile dysfunction before the index date, aged <20 years, or with an incomplete demographic information were excluded. Men without a history of cholelithiasis or erectile dysfunction, including psychogenic and organic erectile dysfunction, the index date was assigned based on the date for the diagnosis of gallbladder stone disease in the study, and one male beneficiary without gallbladder stone disease was frequency-matched with each male patient in the gallbladder stone disease, according to age, index date, and comorbidities including coronary artery disease, chronic obstructive pulmonary disease, chronic kidney disease, hypertension, diabetes, hyperlipidemia, depression, anxiety, asthma, and alcohol-related illness. We identified the first diagnosis of organic and psychogenic erectile dysfunction as the study endpoint.

3. RESULT

Table No. 1: Age Distribution

S. No.	Age	No.	Percentage	P Value
1	≤49	37	37	
2	50–64	29	29	
3	More than 65	34	34	.000012

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Mean ± SD: 56.3±13.1
We found maximum no. of cases in less than 49 age group i.e. 37%, the chi-square statistic is 19.0872. The *p*-value is .000012. The result is significant at $p < .05$.

Table No. 2: Patient type

S. No.	Patient type	No.	Percentage	P Value
1	In-Patient	23	23	.002636
2	Out-Patient	77	77	

We found 23% in patients. The chi-square statistic is 9.0439. The *p*-value is .002636. The result is significant at $p < .05$.

Table No. 3: Comorbidity

S. No.	Variables	No.	Percentage	P Value
1	Coronary artery disease	23	23	.040611
2	Chronic obstructive pulmonary disease	17	17	
3	Chronic kidney disease	11	11	
4	Hypertension	41	41	
5	Diabetes	13	13	
6	Anxiety & Depression	09	09	
7	Asthma	08	08	
8	Alcohol-related illness	07	07	

Maximum Comorbidity was found in Hypertension 41% followed by Coronary artery disease i.e. 23%. The chi-square statistic is 3.0525. The *p*-value is .040611. The result is significant at $p < .05$.

Table No. 4: Organic erectile dysfunction

S. No.	Organic erectile dysfunction	No.	Percentage	P Value
1	Nongallbladder stone disease	02	02	.049769
2	Gallbladder stone disease			
	Without cholecystectomy	06	06	
	With cholecystectomy	03	03	
3	Psychogenic erectile dysfunction			
	Nongallbladder stone disease	01	01	

The chi-square statistic is 2.7429. The *p*-value is .049769. The result is significant at $p < .05$.

4. DISCUSSION

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There are four physiological factors that must contribute to the erection process to successfully sustain an erection: blood, shen, qi and jing. The blood must flow to the penis to cause it to swell and harden[7]. When the shen is in harmony, it can focus upon the penis to create sexual desire. Proper qi flow to the penis creates a sensation of heat within the penis. Finally, jing must flow to the penis to bring forth the ejaculation.

There is a natural, harmonious process to the sexual act. This process has been studied and written upon in detail by Chinese physicians. It is apparent that a great deal of frustration is found on the part of both sexes within Western society in the quest for the fulfilment of sexual needs[8].

This issue has been long addressed within Chinese and Daoist medical literature. A feature that appears unique to Chinese "sexology" literature is the concept of the sexual act as a therapy for optimal health when using proper technique and fostering a sexually mature attitude. The harmonious blossoming of the sexual process includes the physiological requirements that must be met to achieve a normal, healthy erection.

We found that most subjects with gallstones are asymptomatic and no differences could be found in comparison with those without stones. This is in agreement with several other studies. As in another study, the size and number of gallstones, did not influence symptomatology. On the other hand, size or volume is of importance regarding complications. Small or multiple stones are reportedly associated with increased risk of pancreatitis and large volumes (multiple stones) with gallbladder carcinoma[9-11]. Since pancreatitis is a common and sometimes life threatening complication, some even recommend prophylactic cholecystectomy for cases with small or multiple stones, symptomatology disregarded.

Pain in the right upper quadrant is the only specific, although weak, predictor of symptomatic gallstone disease. Persons who previously had undergone a cholecystectomy experienced more pain. These persons also reported lower quality of life[12]. The question whether these symptoms and reduced quality of life are caused by, worsened or reduced by the cholecystectomy could not be answered in that study, but inspired to a study on postcholecystectomy syndrome.

The prevention of gallstone recurrence with aspirin or NSAIDs has been described, but as in our studies, no such association was found in a large randomised trial or in animal studies. Some suggest that smoking prevents gallstone development, but the matter is controversial since others found smoking to be independent risk factor[13-14]. We found no association in our prevalence and incidence studies.

Alcohol consumption was shown to be associated with a decreased risk of developing symptomatic gallstone disease. Although these findings are not undisputed, in accordance with our studies.

5. CONCLUSION

Significant deficiencies in the evidence base of erectile dysfunction with gallstone disease and as a result most guidelines are associated with a low level of evidence and lack consensus. Focused high quality research is needed to definitively address the knowledge gaps in the diagnosis and management of erectile dysfunction gallstone disease. Ultimately, when focused research is completed updated guidelines should be developed by multidisciplinary team, and then well implemented with endorsement by a wide range of medical and surgical societies. This will contribute to a decrease in practice variation and improve patient care.

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