Clinics in Surgery

Research Article
Published: 29 Mar, 2017

Health Perceptions amongst Patients with Fatty Liver – A Weighty Issue

*Lee Jonathan WJ[1], Koh Calvin J[2] and Lee Yin Mei[1,2]**

[1]Department of Gastroenterology and Hepatology, National University Hospital, Singapore

[2]Department of Medicine, National University of Singapore, Singapore

Abstract

The prevalence of obesity and non-alcoholic fatty liver disease is rising in many countries. Bariatric surgery is considered an effective intervention for patients to achieve significant weight loss, yet not all patients are receptive towards bariatric surgery. This study aims to investigate the current health perceptions of patients towards weight management. In our study, only 38.1% surveyed were receptive towards surgical or endoscopic intervention for weight loss. Majority of the respondents were dependent on social media and the internet as their primary means to obtain health information. However, patients who were either obese or with fatty liver were more likely to approach their doctors for health advice, rather than to refer to social medial and the internet. Patients at greater risk of metabolic complications (obese, fatty liver, elderly) had inflated healthy BMI perceptions.

Keywords: Obesity; Bariatric surgery; Health perceptions; Non-alcoholic fatty liver disease

Introduction

The prevalence of obesity is rising in many countries. In Singapore, the national health survey in 2010 found that obesity had increased from 6.9% in 2004 to 10.8% in 2010 [1]. In tandem, the prevalence of non-alcoholic fatty liver disease (NAFLD) was 40% [2]. In the recently published Asian consensus on obesity [3], experts were largely in agreement that bariatric surgery was effective amongst patients with either morbid obesity or NAFLD, to achieve significant weight loss. Although the rates of bariatric surgery procedures in Asia have been growing at a rapid rate [4], not all obese patients are receptive towards bariatric surgery. This study aim to determine current beliefs and perceptions of local patients toward weight management, such as to facilitate successful future implementation of weight management programs.

Methodology

The inclusion criteria for this study were adults above 21 years of age. Patients with insufficient English language skills were excluded from the study. The self-administered questionnaire was collected from 192 members of the public attending a "Taking charge of your gut health" symposium promoting healthy diet for gut health, and 72 patients seen at a Gastroenterology practice within a tertiary hospital. Verbal consent was implied, and questionnaires remained anonymous. Body mass index (BMI) was calculated through height and weight measurements done just prior to the clinic consultation. The self-administered questionnaire probed patient's perceptions and knowledge of weight management, their preferred source of obtaining weight management information, and their barriers against achieving ideal weight loss. The study was approved by the local hospital Research and Ethics Board. Patients were categorized into groups based on their acceptance of surgical or endoscopic therapy for weight loss: agree, disagree, ambivalent. Categorical variables were presented as frequencies and proportions. Group differences in categorical variables by acceptance of surgical/endoscopic therapy for weight loss were analyzed using chi-square and Fischer exact tests. Predictors of acceptance of surgical/endoscopic weight loss intervention were examined using logistic regression analysis. Analyses were completed using SPSS version 20; statistical significance was defined as $p<0.05$.

Results

The survey population included 152 Female (56.7%) and 116 Male (43.3%), whereby the majority were Chinese (92.5%), and above 50 years old (80.6%). Amongst the 76 patients with observed height

OPEN ACCESS

Correspondence:
Lee Yin Mei, Department of Gastroenterology and Hepatology, National University Hospital, Level 10, NUHS Tower Block, 1E Kent Ridge Road, 119228, Singapore, Tel: 67725555;
E-mail: mdcleeym@nus.edu.sg

Received Date: *16 Dec 2016*
Accepted Date*: 17 Mar 2017*
Published Date*: 29 Mar 2017*

Citation:
Lee Jonathan WJ, Koh Calvin J, Lee Yin Mei. Health Perceptions amongst Patients with Fatty Liver – A Weighty Issue. Clin Surg. 2017; 2: 1372.

Table 1: Demographic did not differ by interest category.

If a very overweight person is unable to lose weight, for good health she/he can consider endoscopy or an operation on the stomach or intestines to lose weight.	Overall (%)	Agree (%)	Disagree (%)	Not Sure (%)
	268	102 (38.1)	96 (35.8)	70 (26.1)
Age >50 years	215 (80.2)	85 (83.3)	72 (75.0)	58 (82.9)
Male	116 (43.3)	42 (41.2)	44 (45.8)	30 (42.9)
Ethnicity: Chinese	248 (92.5)	98 (96.1)	90 (97.8)	60 (85.7)

Table 2: Non-alcoholic fatty liver disease.

If a very overweight person is unable to lose weight, for good health she/he can consider endoscopy or an operation on the stomach or intestines to lose weight.	Overall (%)	Agree (%)	Disagree (%)	Not Sure (%)
	Overall	Agree	Disagree	Not Sure
	76	21 (27.6)	28 (36.8)	27 (35.5)
NAFLD	23 (30.3)	5 (21.7)	8 (34.8)	10 (43.5)
Obesity: BMI >23	38 (50.0)	13 (34.2)	11 (28.9)	14 (36.8)

Table 3: Obtained health information.

Where do you usually get health information and advice from?	Overall	Doctor	Friends/ Family	Internet/ Social media	Not sure
	268	68 (25.4)	24 (9.0)	174 (64.9)	2 (0.7)
Agreeable for Endoscopic/Surgical intervention for weight loss	102 (38.1)	25 (24.5)	9 (8.8)	68 (66.7)	0
NAFLD	23 (30.3)	9 (39.1)	4 (17.4)	10 (43.5)	0
Obese	38 (50.0)	15 (39.5)	8 (21.1)	15 (39.5)	0

Table 4: Appropriate healthy BMI impression.

	18-23	24-29	30-35	>35	Not sure
What is the healthy BMI range for Asians?	167 (62.3)	24-29 (13.4)	8 (3.0)	4 (1.5)	53 (19.8)

Table 5: Higher BMI as acceptable.

	Ideal BMI <23	Ideal BMI >23	Odds Ratio	Adjusted OR
Age >50	128/167	44/48	3.35 (1.13 – 9.91; p=0.02)	0.12 (0.01 – 1.24; p=0.08)
NAFLD	4/33	7/11	12.7 (2.53 – 63.7; p<0.01)	0.14 (0.02 – 1.05; p=0.06)
BMI >23	11/33	8/11	5.33 (1.18 – 24.2, p=0.04)	0.54 (0.07 – 3.96; p=0.54)

and weight, 50% were overweight/obese (BMI >23 kg/m^2), and 29.1% were diagnosed with non-alcoholic fatty liver disease. Within our sample, 38.1% (n=102) were receptive toward surgical or endoscopic intervention for weight loss, whereby 35.8% (n=96) disagreed and the remaining 26.1% (n=70) were ambivalent. Demographic did not differ by interest category (p >0.05) (Table 1). Of the 76 patients who had observed BMI, 30.3% (n=23) had non-alcoholic fatty liver disease (NAFLD) and 50% (n=38) were overweight/obese (BMI >23 kg/m^2) (Table 2). Patients who were overweight/obese were more likely to agree for surgical/endoscopic weight loss intervention (OR 1.95; 95%CI 0.70–5.45). However, patients with NAFLD were less likely to agree for surgical/endoscopic intervention (OR 0.64; 95% CI 0.20–2.03).

Majority (64.9%) of the respondents prefer internet and social media as the primary source to obtain health information (Table3). Patients who are either overweight/obese (BMI >23 kg/m^2) (OR 2.00; 95% CI 0.74–5.42) or with NAFLD (OR 1.45; 95% CI 0.50–4.25) are more likely to approach their doctors for health information. Majority (62.3%) of the respondents have an appropriate healthy BMI impression (Table 4). However, the following groups are more likely to perceive a higher BMI as acceptable (Table 5): (a) Age more than 50 years old, (b) Patients with NAFLD, (c) Patients with BMI >23 kg/m^2. On multivariate logistic regression, none of the above predicators were statistically significant, although there was a trend towards those with NAFLD to have an inflated view of BMI (p=0.06).

Discussion

It is of concern that patients at higher risk of metabolic complications–those with fatty liver, age more than 50 years, and obese, perceive a higher BMI as acceptable, hence putting them at greater risk. Furthermore, patients with NAFLD are less likely to agree for surgical. Endoscopy intervention for weight loss. Our findings are consistent with Standford et al. [5] findings which demonstrated that the individual's weight perception is related to their acceptability of bariatric surgery; obese patients who are concordant with their perceived weight status are more likely to consider bariatric surgery more appropriate for them. Of interest, it was previously demonstrated that physical activity and sedentary behaviors do not predict patients' preference between bariatric surgery and conventional lifestyle intervention [6]. It is therefore important that patients at risk of metabolic complications are first made aware of the accurate healthy BMI range, in aim to achieve weight perception concordance. Most patients in this study are either not keen (36.8%) or unsure (35.5%) about endoscopic/surgical intervention for weight management; whereby previous studies reported the interest for bariatric surgery to range between 22-61%, pending the study

population [7,8]. Common barriers for patients accepting surgical intervention for weight management were previously identified as the patients' fear of the surgical complications, costs, length of recovery and duration of benefits [8,9]. Until recently, patients seeking weight loss interventions were limited to either conservative measures (ie. diet and lifestyle modification) or bariatric surgery. The low utilization of bariatric surgery has been attributed to similar concerns raised by the patients, including the high initial healthcare cost, restricted payer coverage in lower BMI ranges, and perceived invasiveness. Our group was the first to demonstrate effectiveness in achieving weight loss and regression in liver inflammation amongst NAFLD patients who under endoscopic bariatric therapy [10]. Endoscopic interventions have the potential to be more effective than conservative measures, and yet less invasive than bariatric surgery. Therefore, patients previously disinterested or undecided regarding bariatric surgery may still be receptive towards the implementation of endoscopic bariatric therapy. Majority of the respondents in this study were dependent on social media and the internet as their primary means to obtain health information. However, patients who were either obese or with NAFLD were more likely to approach their doctors for health information. Wharton and colleagues [7] had previously shown that patients consulting specialists or nurse practitioners about weight loss management, as compared to patients interacting with family doctors, were more likely to demonstrate interest in bariatric surgery. This is important to note as one in three patients in this study are still undecided regarding surgical intervention for weight management, and would probably benefit from early referral to an appropriate specialist or nurse practitioner review.

Conclusion

Endoscopic bariatric therapy is effective for weight loss. One in three patients would still be undecided regarding endoscopic/surgical weight loss intervention. Patients at greater risk of metabolic complications have an inflated healthy BMI perception. Such patients are also more likely to turn to their doctors for health advice regarding weight loss.

References

1. Goh LG, Pang J. Obesity in Singapore, Prevention and Control. Singapore Fam Physician. 2012;38:8.
2. Goh GB, Kwan C, Lim SY, Venkatanarasimha NK, Abu-Bakar R, Krishnamoorthy TL, et al. Perceptions of non-alcoholic fatty liver disease – an Asian community-based study. Gastroenterol Rep (Oxf). 2016;4:131-5.
3. Koh JC, Loo WM, Goh KL, Sugano K, Chan WK, Chiu WY, et al Asian consensus on the relationship between obesity and gastrointestinal and liver diseases. J Gastroenterol Hepatol. 2016;31:1405-13.
4. Lomanto D, Lee WJ, Goel R, Lee JJ, Shabbir A, So JB, et al. Bariatric surgery in Asia in the last 5 years (2005–2009). Obes Surg. 2011;22:502-26.
5. Stanford FC, Kyle TK, Claridy MD, Nadglowski JF, Apovian CM. The influence of an individual's weight perception on the acceptance of bariatric surgery. Obesity (Silver Spring). 2015;23:277-81.
6. Bond DS, Unick JL, Jakicic JM, Vithiananthan S, Trautvetter J, O'Leary KC, et al. Physical activity and quality of life in severely obese individuals seeking bariatric surgery or lifestyle intervention. Health Qual Life Outcomes. 2012;10:86.
7. Wharton S, Serodio KJ, Kuk JL, Sivapalan N, Craik A, Aarts MA. Interest, views and perceived barriers to bariatric surgery in patients with morbid obesity. Clin Obes. 2016;6:154-60.
8. Chua HW, Zhou HJ, Khoo CM, Shabbir A, Lomanto D, So JB. Attitudes and Concerns of Diabetic Patients towards Bariatric Surgery as Treatment of Diabetes. Ann Acad Med Singapore. 2016;45:495-506.
9. Wee CC, Hamel MB, Apovian CM, Blackburn GL, Bolcic-Jankovic D, Colten ME, et al. Expectations for weight loss and willingness to accept risk among patients seeking weight loss surgery. JAMA Surg. 2013;148:264-71.
10. Lee YM, Low HC, Lim LG, Dan YY, Aung MO, Cheng CL, et al. Intragastric balloon significantly improves nonalcoholic fatty liver disease activity score in obese patients with nonalcoholic steatohepatitis:a pilot study. Gastrointest Endosc. 2012;76:756-60.