Title: A survey of bariatric surgical and reproductive health professionals' knowledge and provision of contraception to reproductive-aged bariatric surgical patients

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Abstract

Background

Over 80% of bariatric surgical patients are women with obesity in their reproductive years. Obesity adversely affects fertility; the rapid weight loss following bariatric surgery can increase fecundity. Current guidelines recommend avoiding pregnancy for up to 24 months following surgery, but little is known about current contraceptive care of women who undergo bariatric surgery. Two surveys were undertaken with bariatric surgical and contraceptive practitioners in England to establish current contraceptive practices in both groups.

Methods

Two anonymous on-line surveys were sent to all 382 members of the British Obesity and Metabolic Surgery Society (BOMSS) and an estimated 300 contraceptive practitioners in the North East of England.

Results

The BOMSS survey elicited a response rate of 17% (n=65), mainly from bariatric surgeons [n=24 (36%)]. Most respondents (97%) acknowledged the need to educate patients but contraceptive information was only provided by 7% (n=4) of respondents in bariatric surgical clinics. Less than half of respondents were confident discussing contraception, the majority requested further training, guidance and communication with contraceptive practitioners.

The majority of respondents to the contraceptive practitioner survey were General Practitioners (28%, n=20). Three quarters of respondents reported little knowledge of bariatric surgery and many reported not seeing women with obesity requiring contraception before (66%,n=45) or after surgery (71%, n=49).

Conclusions

There is a need to increase knowledge levels of contraception within bariatric surgical teams and to understand why, despite increasing levels of bariatric surgery, women do not seem to be appearing for advice in contraceptive settings.

Key words: bariatric surgery, pregnancy, contraception, fertility

Introduction

Over 80% of women undergoing bariatric surgery in the UK are women of reproductive age (1). Fertility is negatively affected by obesity (2) and rapid and sustained weight-loss attained with bariatric surgery may increase fecundity in this cohort (3). Current guidelines recommend patients refrain from becoming pregnant for up to two years after bariatric surgery (4, 5), because the effects of rapid weight loss achieved during this time (6) and the potential for nutrient deficiencies as a result of surgery on mother and baby have not been accurately determined. Contraception is therefore an important issue for this cohort of patients.

The present UK Medical Eligibility Criteria guidelines for contraception provide advice for obese women (7, 8); but do not comment on the potential impact of bariatric surgery on the efficacy of contraceptive methods. It has been suggested that women with obesity undergoing bariatric surgery have different contraceptive needs compared to non-surgical seeking women with obesity (9), owing to mechanisms of surgery and the physical changes to the body following surgery. Influenced by the lack of research and guidance, the aim of the survey was to establish baseline data of current knowledge and practice of contraception

amongst both bariatric surgical professionals and practitioners of contraception in a range of National Health Service (NHS) settings in the UK.

Methods

Two anonymous on-line surveys using Survey Monkey ® were distributed to targeted groups of practitioners. The first survey was distributed to all 382 members of the British Obesity and Metabolic Surgery Society (BOMSS) in November 2014. Participants were asked to complete the survey within a two week timeframe. Reminders were not permitted by BOMSS. The second on-line survey was distributed during a two week period on behalf of the research team by the Research and Innovation Department of a large NHS hospital to a wide range of contraceptive practitioners across the North East of England working within NHS settings. Snowball sampling was used to facilitate wide distribution of the survey, with respondents asked to circulate the email request to colleagues with an interest in contraception. We estimate that 300 practitioners may have received the request to complete the survey who worked in settings including Primary Care, Sexual Health Clinics, Obstetrics and Gynaecology and Genito-urinary Medicine Departments. This took place over a two week period in March 2015 with no reminder being possible.

Results

The BOMSS survey elicited a 17% (n=65) response rate and the contraceptive practitioner survey elicited a 23 % response rate (n=71). Of the estimated 300 approaches, the contraceptive practitioner survey elicited an approximate 24% (n=71) response rate and was representative of the diverse range of contraceptive practitioners (See Table 1).

Bariatric Practitioners

The majority of responses were from Bariatric Surgeons (37%, n=24), Dietitians 34% (n=22) and Nurses 18% (n=12). Respondents were 53. % (n=34) female and 46.8% (n=30) male. The majority of practitioners had been working in bariatrics for 4-6 years (29.3% n=17), followed by 26% (n=15) for 1-3 years. The majority of bariatric surgical teams 92% (n=59) felt it was their responsibility to provide contraceptive advice as part of pre-surgical preparation, with 84% (n=53) suggesting bariatric nurses were best placed to give this advice. Although 80% (n=51) routinely discussed avoidance of pregnancy after surgery, there was no clear consensus on the timeframe, with 43% (n=27) recommending up to 18 months, 40% (n=25) up to 2 years and 16% (n=10) up to a year. 93% (n=55) of respondents did not provide any contraceptive information in clinic. Discussing contraception with bariatric patients was problematic; 56% (n=35) did not feel comfortable with this issue; 78. % (n=51) did not know of any method which was contraindicated in women with a BMI (kg/m^2) >40. Many respondents (83 %, n=54) felt there was a need for improved communication between bariatric teams and practitioners of contraceptive services.

Contraception Practitioners

General Practitioners 28% (n=20) represented the majority of respondents, of which 75 % (n=53) were female. Most respondents 43% (n=26) had been working in sexual and reproductive healthcare for more than 15 years. Over half of the participants (66% n=45) reported no increase in the number of women with obesity who were seeking bariatric surgery presenting in clinic. Additionally, 71 % (n=49) report no increase in the number of post-surgical women seeking contraceptive advice, despite the increasing levels of bariatric procedures performed nationally(1). Nearly three quarters (73 %, n =52) reported little knowledge of bariatric surgery. Of the small number of women presenting in clinic after

bariatric surgery, practitioners reported gastric banding as procedure most commonly seen 26% (n=17), despite decreasing levels of gastric banding and increased levels of gastric bypasses and sleeves performed in the UK (1). Half of the respondents (n=36) were aware that absorption of oral hormones are affected by the malabsorptive effects of gastric bypass, with one quarter (n=19) not being sure and 22% (n=16) professing to not knowing about the effects. Currently, respondents offered a range of contraceptive methods to women awaiting bariatric surgery (See Table 3). Following surgery, respondents reported suitable contraceptive methods for women depending on their post-operative BMI (see Table 4).

There was a general awareness (62%, n=43) that women should not become pregnant following surgery, but the timeframe was variable. Responses ranged from 6-12 months (29%, n=9), 12-18 months (25%, n=12), 18-24 months (20%, n=10) and not sure (27% n=13). In the UK contraception provision spans a wide range of settings. Table 5 shows practitioners' perceptions of who is best placed to give contraceptive advice to women awaiting bariatric surgery. When asked if bariatric surgical patients were a specialist group and should be treated in specialist contraceptive clinics, the consensus was divided, with 49 % (n=34) agreeing and 50 % (n=35) disagreeing.

Conclusions

Summary of Findings

Within bariatric surgical teams, there is a need to increase both knowledge levels of contraception and confidence in discussing sexual and reproductive health issues with patients; the bariatric nurse was reported to be the best person to lead in this role. Contraceptive practitioners reported not seeing increased numbers of women with obesity pre- and post-bariatric surgery despite increasing levels of bariatric surgery in the UK. Contraceptive practitioners stated gastric banding as the most common procedure in the small

number of women seeking contraception, yet rates of gastric bypass procedures performed in the North East comprise the majority of bariatric procedures. There was an identified lack of information on contraception and bariatric surgery, both for patients and practitioners. Analysis of the practitioner-recommended methods before and after surgery showed that although safety of contraception was taken into account, neither the efficacy of some contraceptive methods following bariatric surgery, nor the physical changes to the body post-operatively, appeared to be considered.

Limitations

The limitations of this work were the low response rates to both surveys. This may have been influenced by only being able to send both surveys out once and being unable to send reminders. The lack of contraceptive knowledge reported by the bariatric surgical practitioners who responded may also be a reason for others not participating in the survey. Owing to the sampling techniques employed, the response rate to the second survey could not be accurately determined, as the request was cascaded across a diverse range of practitioners and settings. The provision of contraception provision is only one of many services provided within other healthcare settings, and recipients of the survey request may not have had an interest in contraception, which also may have contributed to the low response rates. The survey sent to contraceptive practitioners was limited to the North East of England, and may not represent the national picture.

Comparison with other literature

This is the first study examining practitioner perspectives of contraception and bariatric surgery. There is also very little literature on this subject from the patient perspective. A small survey of 35 women (10) showed 85% had received pre-operative and 80% post-operative contraceptive counselling; but only 65% were using any form of contraception.

Pre-surgically, the oral contraceptive pill was used by 51% of women (n=18); post-surgically, its use declined to 31% (n=11) followed by male condoms (37%, n=13) and intrauterine devices (17%, n=5). A retrospective study of 563 Swedish women who had undergone gastric bypass (11) reported 60% of women did not receive any contraceptive counselling prior to bariatric surgery. Intrauterine devices were used by 29% (n=) pre- and 26 % (n=) post-operatively. 30% of the women did not use any contraception in the 12 months following surgery. It has been suggested that intra-uterine devices and systems are currently the only method of contraception not affected by weight-loss, malabsorption or the physical changes to a woman's body after bariatric surgery (9), but the results of this survey show that other methods are also offered to women before and after surgery, and the reasons for the departures from this are an area for further research.

What it means

There is a lack of both knowledge of contraception and in bariatric surgical settings and a subsequent lack of confidence when speaking to women about contraception. There is a concurrent lack of knowledge of bariatric surgery and its effects on contraception, as the efficacy of contraception is affected by the mechanisms of surgery and this needs to be taken into account when discussing contraceptive methods with women who undergo bariatric procedures.

There is an identified lack of patient information on contraception targeted at women undergoing bariatric surgery which needs to be rectified to provide women with materials with which to make informed choices as to their options during before and after bariatric surgery.

Recommendations

Further practitioner education is needed for contraception in the context of bariatric surgery. Communication should be increased between these two groups of practitioners, with pathways of care developed and evaluated to support patients during the pre- and post-operative timeframe. The safety of contraception is important when considering methods for obese women, but the effects of both malabsorptive and restrictive bariatric surgical procedures means efficacy of contraceptive methods must also be considered for women with obesity undergoing bariatric surgery procedures. The suggestions for contraception in women who seek bariatric surgery therefore differ from methods recommended for women with obesity (See Table 5).

This may highlight a need for bariatric surgical specialist within more general settings, as with other disease areas such as asthma and diabetes, so contraception and other health issues which related specifically to bariatric surgery can be identified and managed.

Further research into current contraceptive practices by women of reproductive age who undergo bariatric surgery is recommended, along with exploring the reasons why women with obesity who are awaiting or have undergone bariatric surgery do not appear to be presenting in any contraceptive-providing settings. The small number of women who were reported as presenting for contraceptive advice after bariatric surgery had undergone gastric banding, when it is not a widely offered procedure. This may be that gastric banding and bariatric surgery are perceived to be synonymous terms, which reinforces the need for practitioner awareness and education.

Conflict of Interest:

Kamal Mahawar is on the editorial board of Obesity Surgery. All other authors declare no conflict of interest.

Ethical approval:

For this type of study, implied consent was given; therefore, ethical approval was not required by the University of Sunderland or City Hospitals Sunderland NHS Foundation Trust.

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