

ALLIED HEALTH ABSTRACTS with tables

AH1. GOUTY ATTACKS OCCUR FREQUENTLY IN THE POST-OP GASTRIC BYPASS PATIENT.

Jeffrey E Friedman, MD; Jeffrey Lord, MD; Ramsey Dallal, MD¹
Sacred Heart Health Institute, Pensacola, FL; ¹Albert Einstein, Philadelphia, PA

Background:

Gout is associated with several different diseases such as hypertension, hypertriglyceridemia, cardiovascular disease, renal disease, insulin resistance, and obesity. The incidence of primary gout has doubled over the last 20 years. The prevalence is estimated to be 2% in men older than 30 years of age and 2% in women older than 50. A reduction in urate levels has been observed in patients after weight loss, leading to a decrease in risk of gout. However, surgery and trauma may precipitate an acute attack of gout. After a literature review, we found only two studies that examined the relationship between gout and/or hyperuricemia and bariatric surgery. We examined the incidence of post-operative gouty attacks after Roux-en-Y gastric bypass surgery.

Methods:

In this multi-institutional retrospective study, we reviewed the charts of 411 consecutive patients who underwent gastric bypass surgery between July 2003 and September 2006 for age, height, weight, BMI, medical history of gout, and post-operative course. All patients who underwent a gastric bypass with a post-operative gouty attack were included in this study.

Results:

Of the 411 patients reviewed 21 (5.1%) had a previous diagnosis of gout. 7 of these 21 (33.3%) patients had an acute attack post-operatively. In 4 of the 7 (57.1%) patients, the attack was severe enough to require treatment with corticosteroids. Monoarticular attacks occurred in 5 of 7 patients (71.4%) and polyarticular attacks occurred in 2 of 7 patients (28.6%). One patient with polyarticular gout required a significant rehabilitation stay.

Conclusion:

Gout is an increasingly more common medical problem and is associated with obesity. We found that a significant number of patients with a pre-operative diagnosis of gout developed an acute episode post-operatively. In addition, a significant number of these patients had a severe attack which required treatment with corticosteroids. Prophylaxis may be warranted in all patients with a history of gout that undergo bariatric surgery.

AH2. AN ALGORITHM FOR THE DIFFERENTIAL DIAGNOSIS AND TREATMENT OF REACTIVE HYPOGLYCEMIA IN POST RYGB PATIENTS.

Deborah Watchel, ANP, MPH; Laurie Spalding, MD
Fletcher Allen Health Care, Burlington, VT

Background:

Reactive hypoglycemia has increasingly come to the attention of those caring for gastric bypass patients, particularly with the growing number of gastric bypass surgeries being performed. The true prevalence of hypoglycemia following GBP is not well understood. In addition, the differentiation between true reactive hypoglycemia versus fasting hypoglycemia following gastric bypass surgery has not been discussed in the bariatric surgery literature. Therefore we feel that it is critical:

- 1) to determine the prevalence of reactive hypoglycemia in gastric bypass patients;
- 2) to develop a strategy for the differentiation between sympathoadrenal and neuroglycopenic reactive hypoglycemia, as well as fasting vs. reactive hypoglycemia and initiate the appropriate treatment.

We believed that by using an algorithm, we could more easily define and manage the increasing prevalence of post gastric bypass hypoglycemia.

Methods:

An algorithm was designed to identify symptoms of hypoglycemia during routine post-operative follow-up appointments in the bariatric surgery clinic. Symptoms determine assignment to sympathoadrenal, neuroglycopenic, or mixed hypoglycemia.

Patients undergo lab measurements of glucose, insulin, pro-insulin, and c-peptide during a hypoglycemic episode.

Patients with pure sympathoadrenal symptoms are managed by diet counseling and pharmacotherapeutics. Patients with

reactive hypoglycemia, and elevated insulin and c-peptide levels, and who are assigned to either neuroglycopenic or mixed hypoglycemic symptoms are referred for calcium stimulation testing. Patients with fasting hypoglycemia or mixed fasting and reactive hypoglycemia are evaluated by a pancreas CT to rule out insulinoma. Patients that are determined to have either nesidioblastosis or insulinoma are considered for pancreatic resection. All others are treated with diet modification and/or pharmacotherapeutics.

Results:

Ten patients between the ages of 36 and 56 with hypoglycemia over a 3 year period. Seven of the patients had elevated insulin and c-peptide levels and were evaluated with Calcium stimulation. Nesidioblastosis was diagnosed in 4 of those patients who subsequently underwent pancreas dissection. Out of the remaining 6 patients, one had fasting hypoglycemia and is being evaluated by CT for insulinoma, 1 has not completed her initial blood work, 5 patients had normal or mildly elevated insulin and c-peptide results and are being treated with pharmacotherapeutics.

Conclusion:

Our experience suggests that reactive hypoglycemia is underappreciated and may be challenging to diagnose and manage. The symptoms questionnaire and algorithm has resulted in a quicker diagnosis and more appropriate matching of treatment to etiology..

AH3. PREDICTORS OF PATIENT ADHERENCE TO FOLLOW-UP CARE AFTER BARIATRIC SURGERY.

Erlinda C Wheeler, DNS, RN; Allen Prettyman, MSN, CFNP; James Lenhard, MD, FACE¹; Kim Tran, R.PH, MBA¹
University of Delaware, Newark, NJ; ¹Christiana Care Health System, Newark, NJ

Background:

For the morbidly obese (BMI > 40 kg/m²), surgery is the only treatment that has been proven to have positive long-term effects. A recent study showed that the rate of complication after bariatric surgery is 39.6 % over the 180 days after discharge. One of the requirements for the Centers for Excellence program instituted by ASBS is to have a system in place to provide comprehensive follow-up care. Inadequate adherence to follow-up care has been recognized as contributory to the development of complications following bariatric surgery. The purpose of this study was to examine variables that relate to patients adherence to scheduled appointments after bariatric surgery.

Methods: A block entry logistic regression analysis was done from a data base of an outpatient bariatric program that contained cross sectional data collected over a one year period. The variables used and the order entered into the model are presented in Figure 1. Patient adherence to follow-up was defined as having one post surgical follow-up appointment within 90 days of having surgery. Three hundred and seventy five subjects completed the preoperative program and had either laparoscopic Roux-en-Y gastric bypass (84.3 %) or LAGB (15.7 %).

Results:

Of the fourteen variables used in the analysis, five variables were found to be statistically significant (p<0.05): older patients, single, employed, lesser BMI and patients with health insurance that pay for health services were found to be more adherent.

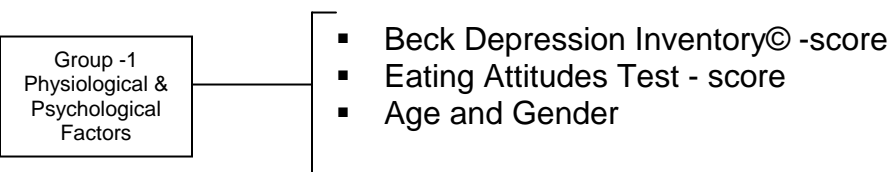
Conclusion:

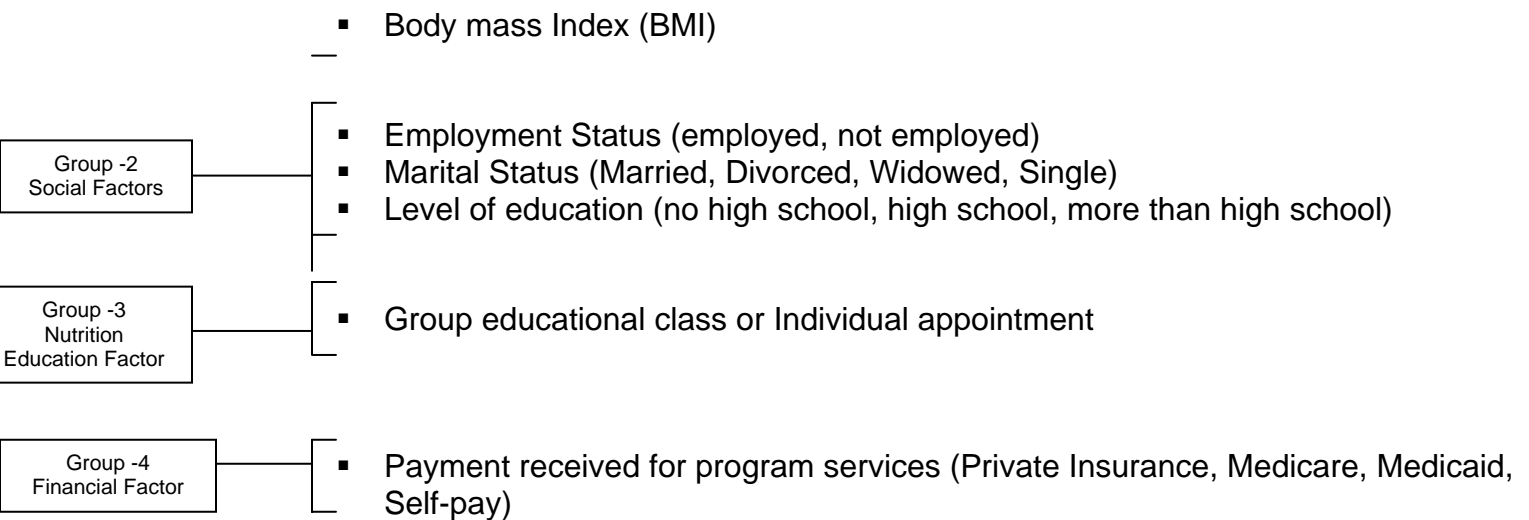
Incorporation of the identified predictors of adherence into preoperative screening tools to flag patients at risk for non-adherence may improve follow-up care.

Figure - 1

Dependent Variable – Adherence with post-surgical appointment (yes or no).

Independent Variables –





AH4. PSYCHOLOGICAL PROFILE OF CANDIDATES TO BARIATRIC SURGERY THROUGH THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY (MMPI-2).

Jakelinne Davalos-Luna, Psych; Sofia Sanchez-Roman, Psych; Angeles Vargas-Martinez, Psych; Veronica Vazquez-Velazquez, Psych; Eduardo Garcia-Garcia, MD; Annemarie Brugmann-Garcia, Psych; Miguel Herrera-Hernandez, PhD; Denise Arcila-Martinez, Psych
 Instituto Nal Ciencias Medicas y Nutricion Salvador Zubiran, Mexico City, Mexico

Background:

Obesity is a disorder of multifactorial etiology and is consider at present a world pandemic and the main cause of lethal sickness. Bariatric surgery is a force behavior modification and the operation represents only one element in it, behavioral and psychological factors play an important role in its results. Consequently, better understanding of candidates for Bariatric surgery may improve selection for and success with this intervention. It has been said a lot with regard to the association between obesity and psychopathology, nevertheless up to now there is not conclusive results in Mexican patients. The aim was to establish a psychological profile of the candidates to Bariatric surgery morbid obesity with the MMPI-2.

Methods:

The cohort included 100 subjects (69 women and 31 men), who came in research of surgical treatment to a medical institution of Mexico city. Minnesota Multiphasic Personality Inventory (MMPI-2) was administered.

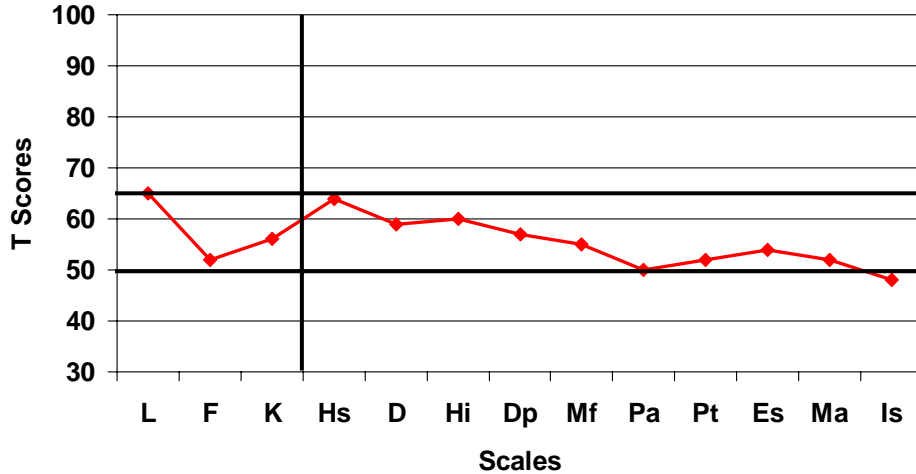
Results:

Only one scale HS (hypochondriasis) registered a score of T 67.5, which describes the health concerns and treatment requirements. The conventional statistical method of central tendency measurement did not establish a typical personality pattern of the patient. We therefore used a cluster computerized program that gave us four clusters, only Cluster number 1 included 63 subjects with morbid obesity, that represent the most typical group.

Conclusion:

There is not an unique and typical personality of the individual with diagnosis of morbid obesity. Nevertheless, a large quantity of patients exists that share certain characteristics that are more frequent in the 63% of the sample.

Cluster 1 (n=63)



AH5. WHERE IN THE WORLD IS CARMEN SANDIEGO? STRATEGIES FOR IMPROVING FOLLOW-UP RATES WITH BARIATRIC PATIENTS.

Dawn M Miller, MA; Karen Schulz, RN, MSN; Aviv Ben-Meir, MD, FACS; Louise Howe, RN; Helmut Schreiber, MD, FACS; IM Sonpal, MD, FACS; John Marshall, MD
St. Vincent Charity Hospital, Cleveland, OH

Background:

Consistent follow-up with bariatric patients is extremely challenging. Our 1-year follow-up rates averaged 34 - 58% despite requirements for annual visits specified in the pre-surgical consent form. Other follow-up improvement strategies included program-sponsored group events, postage-paid and online questionnaires, and daytime phone calls from bariatric nurses. These methods yielded response rates of only 8 - 10%.

Methods:

We implemented a Quality Improvement (QI) Project designed to elicit barriers to follow-up compliance. We began by adapting an already existing health questionnaire and added sections related to follow-up visits and patient satisfaction.

Results:

From Aug 2005 to Aug 2006, we collected 1,034 Health Questionnaires (average 3.5 years post-surgery). Barriers to follow-up included geographic distance from our office, dissatisfaction with weight loss, discomfort with the group format of follow-up visits, and feeling "lost" / disconnected from our high-volume program (nearly 6000 post-op patients). Three months into the project, we created the "Flexible Visit" based on patient feedback and hired a nurse consultant to telephone patients in the evening who were 1-yr out or more from surgery and overdue for follow-up.

The nurse consultant documented outcomes and referred patients (when needed) to a program physician, nurse, or dietician. She also successfully reconnected patients to our program via personalized healthcare customer service.

Subsequently, our one-year follow-up rates have increased to over 80%.

Conclusion:

Although patient follow-up is a challenging area, substantial improvements in follow-up rates can be made by actively soliciting patient feedback, tailoring an action plan based on that feedback, and providing a personalized touch to improve patient satisfaction.

AH6. CREATING PARTNERSHIPS THAT LAST - EDUCATION IS THE KEY TO OPENING THE DOOR (AT INSURERS, EMPLOYERS, REFERRING PHYSICIANS).

Pamela R Davis, RN, CCM
Baptist Metabolic Surgery Center, Nashville, TN

Background:

While the number of bariatric surgeries performed annually continues to increase, only a small percentage of appropriate candidates can access the services they need. Continued resistance by the employer to provide coverage for surgery, barriers by the insurance company to grant approval for surgery and frequently, inaccurate information provided by the Primary Care (referring) Physician are all areas that we as a (bariatric) society must address to provide our patients access to bariatric surgery.

Methods:

By reaching out to area employers to educate them on the topics of obesity, morbid obesity and obesity management we have been able to foster an atmosphere where the employer now regards us as their educational partner. Initial visits to select referring physicians revealed an overall lack of general education about bariatric surgery procedures, risks, benefits, mortality rates and long-term outcomes. We now work to educate our referring physicians through direct visits, CME activities, open houses, and by communicating individual patient outcomes to the Primary Care Physician and specialists at set intervals. This same method of providing education and blinded outcome data to insurers works to provide increased understanding of obesity, morbid obesity and the management of these diseases. By working with both the state and national Case Management Society of America (CMSA, 9000 members worldwide which includes a high percentage of insurance case managers), we have provided a Resource Path for the Case Management of the Morbidly Obese patient and CEUs to further their knowledge of bariatric surgery, including from the patient perspective.

Results:

After targeting select employers in our area and providing nursing contact hours in a lunch and learn setting, we have been invited to provide on-site seminars and support groups which illustrate our commitment to their employees long-term. Feedback from referring physicians has been extremely positive, with increased referrals from these groups. Many have commented they are now much more comfortable referring their patient for surgery after meeting the surgeon and knowing what is involved in caring for their patients. The efforts with the insurers have led to increased communication and requests for additional education regarding long-term support and outcomes.

Conclusion:

By providing unbiased, factual education to employers, insurers and referring physicians, the bariatric center can establish themselves as a credible partner laying the foundation for additional partnerships. It is extremely important that education be provided in an unbiased format and not an 'it's all about us' approach. For those groups that are not supportive of bariatric surgery, it's important to start by educating first on the topics of obesity, morbid obesity and the related comorbid conditions, then all of the treatment options, you must let the audience come to the conclusion (based on the facts you've provided) that for many, bariatric surgery is the only viable treatment option. Education does not end with attaining coverage for bariatric surgery, it is only the beginning of your partnership.

AH7. AN EVALUATION OF BARIATRIC CENTERS OF EXCELLENCE WEB SITES FOR FUNCTIONALITY AND EFFICACY.

Julia M Kabakov, BS, CP; Eran Kabakov, BS, PT; Joseph A. Caruana, MD
Synergy Bariatrics, Williamsville, NY

Background:

The internet is one of the best methods of information sharing for bariatric surgical practices and may improve patient access to the best programs. We assessed the quality of bariatric practice websites using original, specific criteria of functionality and efficacy.

Methods:

We visited the Surgical Review Committee (SRC) website to identify accredited Centers of Excellence (COE). Links published from the SRC website to individual COE were followed to determine the study group. Excluded were sites which evidenced lack of total content control, listed non-bariatric services, were under construction, and/or had pooled funding.

Criteria for evaluation of website functionality were Marketing, Interactivity, Education, and Support. Each of these criteria was further divided into three to seven sub criteria for more in depth analysis.

Results:

As of November 4, 2006, there were 203 COE. One hundred sixteen (57%) posted website links from the SRC web page. Fifty of these were excluded for the reasons given above. Survey results of the remaining COE websites (Table) revealed marketing and education content in all sites and nearly all were interactive and provided patient support. However, all websites had deficiencies in more than one sub criteria.

Conclusion:

Many COE have a web presence. However, there is the opportunity to optimize functionality and maximize exposure, improve efficacy, and enhance quality of care to patients who are seeking or have had weight loss surgery.

Criteria	Marketing	Interactivity	Education	Support
Number of COE meeting criteria	66	65	66	55
Number of COE meeting all sub criteria	10	0	0	2

AH8. LAPAROSCOPIC GASTRIC BANDING ALGORITHM FOR LAP BAND SALVAGE IN PATIENTS WITH POOR WEIGHT LOSS.

Emmanuel A Agaba, MD; Gentles Charmaine, ANP; Shamseddeen Hazem, MD; Dominick Gadelata, MD; Larry Gellman, MD
North Shore University Hospital, Manhasset, NY

Background:

Since 2001 the FDA approved laparoscopic gastric banding as a safe and efficacious surgical procedure for weight loss. Weight loss averages have been stated to be between 40-60% of excess body weight (EBW) at 5 years. Patients are presenting with increasing frequency for failed weight loss or plateau following lap banding.

Methods:

Between January 2001 and June 2006, we retrospectively reviewed 234 laparoscopic gastric banding performed in our institution. Of this, 53 patients showed no significant no weight loss over 1-3 months. Patient's food preferences were reviewed and an alternative bulky food choice was offered and bands were loosened depending on tightness.

Results:

We have found this strategy to salvage 40% of the LapBand patients with poor weight loss. Of the remaining 32 patients, 6 patients were converted to Roux-en-Y gastric bypass.

The remainder continues to improve with the dietary regimen.

Conclusion:

This alternative algorithm for LapBand adjustment has been utilized within our institution, seems to assist patients that have stalled or have unsatisfactory weight loss.

AH9. BARIATRIC SURGERY IMPROVES CARDIAC RISK FACTORS IN MORBIDLY OBESE ADOLESCENTS.

John M Morton, MD, MPH; Sanjeev Dutta, MD¹; Judith C. Hagedorn, MHS; Betsy Encarnacion, BS; Craig T. Albanese, MD¹

Stanford University, Stanford, CA; ¹Lucille Packard Childrens' Hospital, Stanford, CA

Background:

Morbid obesity is a public health epidemic with increasing prevalence among the adolescent population. Morbid obesity in the adolescent population clearly raises their risk of cardiovascular disease in the future. Bariatric surgery is the only effective and enduring treatment for morbid obesity and can improve cardiac risk. The study aim was to examine the effect of bariatric surgery upon cardiac risk factors in a morbidly obese adolescent population

Methods:

Retrospective review of all surgical patients enrolled in a comprehensive, single institution, multidisciplinary bariatric program. Data include patient age and gender, preoperative weight and body mass index (BMI), comorbidities, type of procedure, length of follow-up, percent excess weight loss (%EWL), and cardiac risk factors.

Results:

Twelve patients (9F:3M) with mean age 17 years (range 15 – 19) underwent laparoscopic bariatric procedures (11 gastric bypass, 1 adjustable band). Comorbidities included sleep apnea (7), pseudotumor cerebri (3), Type II diabetes (2), metabolic syndrome (3), hypertension (9), and depression (2). Mean preoperative weight was 158.0 kg (range 103.0 – 207.4) and BMI was 56 (range 42 – 79) kg/m². Mean follow-up was 12 mos. (range 0.5 – 27), with 1 year follow-up in 4 patients. Mean %EWL at 1 year was 60. No patient was on statin therapy pre- or post-operatively. Preoperatively, the highest rate of abnormality for cardiac risk factors included high-sensitivity C-reactive protein (70%) and HDL (55%). The results are summarized below:

Conclusion:

Adolescent bariatric surgery patients had substantial reduction in weight post-operatively. In this study, adolescent bariatric surgery patients carried elevated pre-operative cardiac risk as determined by CRP and HDL which both normalized after bariatric surgery.

Cardiac Risk Factor	Pre-Op	3 months	6 months	12 months
Tot Cholesterol	154	138	135	133
Triglycerides	88	100	86	66
HDL	39	39	41	48
LDL	101	85	80	66
Trig/HDL	3.7	3.8	3.4	2.5
LipoProtein a	15	15	9	9
CRP	5.8	6.2	2.7	.09
Homocysteine	9	8.3	9	6.5

AH10. REFUSALS, DENIALS, AND PATIENT CHOICE: REASONS PROSPECTIVE PATIENTS DO NOT HAVE BARIATRIC SURGERY.

Subramaniam Sadhasivam MD; Michelle Mathiason, MS; Pamela J Lambert, RN; Shanu N Kothari, MD
Gundersen Lutheran Medical Center, La Crosse, WI

Background:

Prospective laparoscopic gastric bypass (LGB) surgery patients often do not have the procedure. We analyzed the reasons patients did not undergo LGB surgery.

Methods:

Our prospective LGB patients attend a mandatory informational seminar. Our multidisciplinary team then evaluates their suitability for surgery. Charts of all patients so evaluated from 2001 through 2005 were retrospectively reviewed for age, BMI, sex, co-morbidities, initial evaluation date, and reasons for not having surgery. The Mantel-Haenszel test was used to test for reason and insurance trends over time.

Results:

Of 1054 patients evaluated, 515 underwent surgery at our institution and 539 did not. Percentage female did not differ between LGB (82.3%) and non-LGB (78.5%) patients ($p=0.116$), nor was there a difference in BMI (48 vs 49) ($p=0.074$). Percentage of patients not having LGB increased from 2001 (36.6%) to 2005 (53.7%) ($p=0.001$). The percentage of patients not having LGB because of insurance denials or unattainable coverage prerequisite increased from 9.9% in 2001 to 19.9% in 2005 ($p=0.012$).

Conclusion:

The most common reason patients do not have LGB surgery is insurance denial or unattainable coverage prerequisites. The rates both of patients who do not have surgery and of denial of coverage/unattainable coverage prerequisites have increased over time.

Reason	Number	Percentage
Insurance denial (107) or Unattainable coverage prerequisites (53)	160	29.7
Patient program noncompliance	142	26.3
Patient decision	99	18.4
Medically/surgically unsuited to surgery	47	8.7
NIH criteria unmet	34	6.3
Psychologically unsuited to surgery	23	4.3
Surgery elsewhere	7	1.3
Other	27	5.0
Total	539	100.0