National report: treatment of morbid obesity from Australia

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Lilian Kow

Obesity is considered the greatest public health challenges confronting Australia. Amongst developed nations, Australia is one of the most overweight, with over 60% of adults and 25% children overweight or obese.

PREVALENCE OF OBESITY BY AGE AND GENDER, 2008

Age Group	Males (%)	Females (%)	Males ('000)	Females ('000)	Total ('000)
0-4	0%	0%	0	0	0
5-19	7.8%	6.2%	165.4	124.9	290.3
20-24	11.1%	9.3%	84.7	68.2	152.9
25-34	19.4%	13.5%	281.8	193.0	474.8
35-44	19.9%	21.2%	301.5	324.6	626.1
45-54	23.2%	29.2%	338.6	430.8	769.4
55-64	28.5%	35.6%	344.9	431.7	776.6
65-74	22.2%	31.9%	164.4	244.2	408.6
75+	14.2%	16.9%	79.6	134.3	213.9
Total	**16.5%**	**18.5%**	**1,760.8**	**1,951.8**	**3,712.5**

5% of Australians have Type 2 diabetes. Of these, 10.8% are as a result of being obese.
OSSANZ (est 1980) represent the obesity society in Australia and New Zealand. Membership: 350 health professional: surgeons, physicians and Allied Health.

The OSSANZ Bariatric Surgical Standards(OBSS) are the credentialing guidelines . A National registry is being set up. The average cost for bariatric surgery in Australia is about $15000-20000

National Report from Taiwan (Republic of China)

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In the past decade, the incidence of obesity (BMI > 27) increased from 10.5% to 19% in male Taiwanese. Among them, those with moderate or severe obesity increases more rapidly, from 2.4% to 6%. This alarming phenomenon is more common in rural than in urban area. Although the incidence of overweight remained stationary (20.3% to 19.3%) in female Taiwanese, the incidence of mild obesity still increased from 7.6% to 10.5%. More importantly, diabetes (Glucose > 126 mg/dl) incidence increased from 4.6% to 9.3% of adult male in the past decade.

Bariatric surgeries steadily increased in the past 5 years in Taiwan. IFSO Taiwan chapter was founded in 2009. There are more than 5 comprehensive bariatric centers now in Taiwan. In a survey from IFSO Taiwan chapter, the total registered number of bariatric surgeries increased from 255 cases in 2005 to 726 cases in 2009. Laparoscopic gastric bypass is the most commonly performed procedure, followed by sleeve gastrectomy and gastric banding. The results of bariatric surgery in Taiwan are comparative to international standard.

National report of treatment of obesity and metabolic disorder from (India).

Dr. Mahendra Narwaria, MS, FICS.

President, Obesity and Metabolic Surgery Society of India

Asian Indians exhibit unique features of obesity; excess body fat, abdominal adiposity, increased subcutaneous and intra-abdominal fat, and deposition of fat in ectopic sites (liver, muscle, etc.). Obesity is a major driver for the widely prevalent metabolic syndrome and type 2 diabetes mellitus (T2DM) in Asian Indians in India and those residing in other countries. Based on percentage body fat and morbidity data, limits of normal BMI are narrower and lower in Asian Indians than in white Caucasians. A consensus statement, was published for revised guidelines for diagnosis of obesity, abdominal obesity, the metabolic syndrome, physical activity, and drug therapy and bariatric surgery for obesity in Asian Indians after consultations with experts from various regions of India belonging to the various medical disciplines representing reputed medical institutions, hospitals, government funded research institutions, and policy making bodies.

According to National Family and health Survey (NFHS), approximately 7.1% of Indian population is under obesity risk. Almost 65% of adult urban Indian are –either over weight, obese or have abdominal obesity. The highest incidence is observed in North western (Punjab) part of India (M: F- 30.3/37.5%), followed by South (M: F-24.3/34%) and North east (M: F-17.3/21%).

With an estimated 50.8 million people living with diabetes, India has the world's largest diabetes population, followed by china with 43.2 million. The prevalence of type II DM in adult population ranges from 9% to 16%, with 14.2 % of male and17.5 of female.

The Obesity and Metabolic Surgery Society of India was established in 2001. The indication for surgery is generally in accordance with guidelines using the WHO standard for obesity on Asia, i.e. BMI >37.5/32.5 with co-morbidities. There are few no of bariatric and metabolic surgeries carried out outside the standard guidelines for obesity surgery but they are mainly as part of some clinical trials.

There are about 80 surgeons (certified general, GI surgeons with training and experience) performing bariatric surgery regularly in India, carrying out 2000 procedures per year.

There are 5 high volume centres and few of them applied for centre of excellence (ICE) certification from ASMBS.OSSI is jointly working with SRC to develop centre of excellence in India. Cost of bariatric treatment depends upon

the types and location of the operative procedure. We accept and operate the international patients.

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Current status of Bariatric surgery in Korea

Dr. Lee's Bariatric Surgery Center in Seoul, Korea
(*The Korean Metabolic and Bariatric Surgery Society)*
Hongchan Lee, M.D., Ph.D

Obesity is not only a health problem in western countries, but also in Korea. According to 2009 Korean National Health & Nutrition Examination Survey(KNHANES), prevalence of obesity in adults was 32.4% which is a big change over the last 10 yeas. More alarming is the problem of children and adolescent. From 2003 to 2009, number of bariatric procedures was increased in 622%.

All surgeries were performed through laparoscopic procedures. 63.3% adjustable gastric bandings, 12.6% gastric sleeve resections, 5.9% VBGs(with or without sleeve resection) were the restrictive operations performed. 12.0% Roux-en-Y gastric bypass, 12.6% Mini-gastric bypass, 2.6% Duodeno-jejunal Bypass were the malabsorptive(both restrictive) procedures since 2003.

Based on the statistics, the surgeon were performed in most hospitals when the BMI was over 35kg/m2 while more than 2 significant obesity related co-morbidities were found with BMI over 30kg/m2. Currently the bariatric surgery in Korea is still at a developing level, and has not been performed very much compared with the number of patients who need it.

As the bariatric surgery will gain more important as the number of obesity people increases every day, physicians need to make more efforts to help the public to have correct understanding about the bariatric surgery. Insurance coverage is another concern in my country because bariatric surgery is not covered by National Health Insurance in Korea. So, it became an expensive surgery, not accessible for everybody. As obese people are often from middle to lower socioeconomic class, access to surgery is very limited. As these people are in need, we have to raise our voice about reimbursement for bariatric patients.

BARIATRIC & METABOLIC SURGERY in the Philippines

President, Philippine Society for Metabolic and Bariatric Surgery
Hildegardes C. Dineros, MD, FPCS FACS

Third world countries like the Philippines was not immune to the epidemic of Obesity, with a progressively rising prevalence, one in four being overweight and one out of twenty is obese. Roughly, there are 4 million obese Filipinos and close to a million are morbidly obese. Of about 90 million population, the extrapolated prevalence of Diabetes is 5 million, more than 90% of which belong to Type 2 category.
The Philippine experience in Bariatric Surgery started in 2001 as VBG. The following year, Open Gastric Bypass was performed and 5 years later, Laparoscopic techniques were done for RYGBP, Gastric Banding, BPD-DS, and Sleeve Gastrectomy. Class II Obesity, defined as BMI 30kg/m^2 was the baseline criterion for weight loss surgery since at this level, co-morbid conditions are already observed.

The Philippine Society for Metabolic and Bariatric Surgery was established in 2007, composed of about 25 surgeon members, half of which are doing bariatric surgical procedures already, and majority doing mostly Gastric Banding. Certified General Surgeons with training and experience in laparoscopic bariatric surgery, have up to the present, performed close to 600 bariatric operations. Surgery for Non-obese Type 2 Diabetes was first done in 2008using LSG with Loop DJB.

National report from Hong Kong

Wilfred Mui
Hong Kong Bariatric and Metabolic Institute

Bariatric surgery is a new specialty in Hong Kong and it is growing from its infancy stage. It was introduced in Hong Kong in 2001 and the development was very rapid in the past ten years. Bariatric procedure in Hong Kong is evolving from a single surgical procedure (gastric banding) to the full package of both endoscopic and laparoscopic surgeries. The primary procedures in Hong Kong at the moment are restrictive procedures (intragastric balloon, gastric banding, sleeve gastrectomy and sleeve plication), whereas malabsorptive procedures (mini-gastric bypass and sleeve gastrectomy with DJB) are reserved as second-line therapy. Initially, we encountered difficulties in persuading patients and even doctors in accepting such an invasive treatment for obesity. Now, more and more physicians and patients understand the importance of weight control in severe obesity and agree that the beneficial effect of surgery seems out-weighted its risk in selective group of patients. We will report the development of this specialty in Hong Kong.

National Report from Malaysia

Professor Dr Chin Kin Fah (Presenter), Dr Pok Eng Hong
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In Malaysia, a developing country, the increasing prevalence of obesity and associated metabolic syndrome has created major healthcare problem due to the adoption of more westernized lifestyle and diet. Population surveys have found the prevalence of obesity has rapidly increased 3 folds in recent decade. The National Health & Morbidity Study in 1996 and 2006 revealed that the prevalence of overweight (BMI 25-30) rose from 16.6% to 29.1%. The prevalence of obesity (BMI>30) increased from 4.4% to 14%. It was also showed our female population, ethnicity of Indian & Malay and house wife tend to be obese. It was noted the prevalence of diabetes mellitus in this population also increased from 8.3% to 14.9% with substantially portion of them undiagnosed. There is an estimated about 1.5 million diabetes patient (5.7%) which is a significant healthcare burden in Malaysia with a small population of about 26 million people in 2006. Although the bariatric surgery has been prove to be cost-effective treatment of obesity and associated co-morbidity especially DM, the adoption of this advanced surgery is still slow in Malaysia. Currently, only hospitals with qualified and experienced laparoscopic surgeon are routinely offering this procedure. The lack of surgical training opportunity, public awareness and no insurance coverage for obesity might be the factors that hinder the progress of this surgery. Lastly, we foresee, with the rising prevalence of T2DM affecting younger age group and the promising effectiveness of bariatric surgery as a form of metabolic procedure, the most cost effective therapy for early obese T2DM should be surgery, as a first line modality in future.

National Report on Bariatric Surgery from Japan

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Kazunori Kasama MD, FACS

Obesity among adults is defined as a BMI of 25 or higher in Japan. The obesity prevalence (BMI ≧ 25) has increased to 28.6% in male and 20.6% in female over the past decade. Obesity prevalence (BMI ≧ 30) is 3.2%.

The prevalence of diabetes mellitus with HbA1c >6.5 or under treatment has increased from 6.9 million in 1997 to 8.9 million in 2007.

Recently, one of our bariatric societies (Japanese Society for Surgery of Obesity and Metabolic disorders) has announced a statement on BMI criteria for bariatric surgery in Japan. The criteria recommends bariatric surgery for people who have BMI ≧ 35 or BMI ≧ 32 with obesity-related comorbidities. But bariatric surgery for people with BMI between 32 to 35 remained to be positioned on a clinical trial.

From 2000 to 2009, totally, 340 laparoscopic bariatric procedures were performed in 9 institutes. The most popular procedure was laparoscopic Roux-en-Y gastric bypass (LRYGB, n=147), then the second one was laparoscopic sleeve gastrectomy (LSG, n=102) and the third one laparoscopic adjustable gastric banding (LAGB, n=55). However, the number of LRYGB has decreased and in contrast, the number of LSG has rapidly increased.

The medical cost of bariatric surgery is approximately 10.000-20.000 dollars. It depends on the types of procedures.

There are several problems to prevent and treat obesity. Modern lifestyle and foods are out of alignment with true health. Nation's recognition of obesity is an obstacle to civilization and enlightenment of bariatric surgery in Japan.

In conclusion, we are still ill-equipped to deal with the crisis of obesity and diabetes mellitus. It is essential to establish the international network in APC for development in this field.

National report on surgical treatment of obesity and metabolic disorder in Singapore

KTP Hospital Singapore
Dr Anton Cheng

According to the Singapore National Health Survey 2004, obesity rate (BMI > 30) in Singapore was 7.3% in female and 6.4% in male. Among the three major racial groups in Singapore, 4.2% of Chinese, 19.3% of Malays and 13.4% if Indians are obese. In 2004, 8.2% of the population was diabetic , with 8.9% of male and 7.6% of female. The latest unpublished data showed obesity rate has gone to 10.8% of the population in the 2010 National Health Survey, With the Malay population showing 25% obesity. DM rate however, has not changed over the last 12 years.
The Obesity and Metabolic Surgery Society of Singapore is registered as of January 2011. A national database is being set up. Indication for surgery is generally in accordance with the Singapore Ministry if Health guidelines using the WHO standard for obesity on Asia, i.e. BMI > 37.5 or BMI > 32.5 with obesity associated co-morbidities. There is no metabolic surgery carried out outside the standard guidelines for obesity surgery.

There are about 10 surgeons performing bariatric surgery regularly in Singapore, carrying out about 200 procedures per year. 80% of these, divided equally, are sleeve gastrectomies and gastric bands. There are smaller numbers of bypass and other procedures.

There is no certified center of excellence in Bariatric surgery in Singapore. Cost varies according to where these procedures are carried out. A lot of those performed in government hospitals are heavily subsidised.

National report of treatment of morbid obesity and metabolic disorder from Thailand countries

Suthep Udomsawaengsup

Slide-1

- Obesity and overweight prevalence in adults in your country
  - Grade I Obesity = 15.4%
  - Grade II Obesity = 2.2%
- Obesity prevalence in children in your country
  - Age 2-5 = 7.9%
  - Age 6-12 = 6.7%
- Gender and age distribution (possibly)

*use most recent statistics

Slide-2

T2DM prevalence in adults in your country

9.6% 4.8% previously diagnosed and 4.8% newly diagnosed diabetes

Gender and age distribution (possibly)

Male 33.8% Female 66.2%

Mean age = 60.9 + 11.5 and duration of diabetes 10.5+ 7.6 years,

Slide-3

- Do you perform bariatric surgery in your country?
  Yes
- If yes, who is a candidate for bariatric surgery?
  BMI >40kg/m2 or >35 with co-morbidity and had try non surgical Rx
- Do you have a bariatric society in your country?
  Yes Thai Society of Metabolic and Bariatric Surgery (TSMBS)
  http://www.thaibariatric.org

Slide-4

- Approximately how many bariatric surgery operations are being done in your country yearly 100
- What is your estimate as to the relative percentages (adding up to 100%) distribution of bariatric operations in your country RYGB 63% LAGB 29% Sleeve 8%

Slide-5

- Who performs bariatric surgery in your country
  general surgeon- endoscopic surgeon 9 , certified bariatric surgeon 6

- Approximately how many surgeons practice bariatric surgery in your country?
  = 15 surgeons

Slide-6

- Is there any credential system (surgeon, facility)?
  Yes, For Surgeons: the Royal College of Surgeons of Thailand and the Medical Council of Thailand
  Facility: Hospital credential
- If any, what type of professional education or training currently exists for the bariatric surgeon?
  Yes Clinical fellow in Bariatric surgery (2 institute / 4 regular fellow a year)

Slide-6

- Is there any nationwide database for sharing the pre- and post-operative data results to provide a cumulative picture of the success of bariatric surgery?
  Not yet applied

Slide-7

- Roughly, what is the average cost for bariatric surgery in your country?
  *In US dollars
  RYGB = 6000 USD(Government) 20000 USD (private)
  LAGB = 5000 USD (Gov) 15000 USD (pri)
  Lap Sleeve =3000 USD (Gov) 13000 USD (pri)
- Are insurances (government, public, private) paying for the cost of surgery?
  Yes Partially

Slide-8

- Do you perform metabolic surgery for the patients with lower BMI (beyond indication for bariatric surgery) in your country? Yes for Some

- Do you perform revision bariatric surgery in your country?
  Yes
- Do you accept patients from overseas (so called “medical tourist”) in your country?
  Yes

Slide-9

- Which are the problems you face in your country to prevent the obesity disease from spreading?
  Availability and advertising of Junk food Philosophy of Living, Some Believe such as Obese is a sign of Wealthy
- Which are the problems you face in your country to treat the obesity disease?
  Reimbursement system, Acceptance for medical co-worker, Cost of Treatment
- Which are the needs?

Slide 10

- Your favorite topics,
  Metabolic result of Bariatric Surgery in Thais
- Particularity of your country regarding Bariatric/Metabolic surgery.

Slide-11

- Your conclusions to the obesity problems in your country
  The incidence of obesity in Thailand is increasing. Prevention is certainly important. Public has been alerted more about effect and hazard of obesity. Media takes more involvement and helps very much in distributing medical information

- Recommendations

National report of treatment of morbid obesity and metabolic disorders from Turkey

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Istanbul / Turkey.

Slide-1

*Approximately 66% of whole Turkish population is under obesity risk.
*The incidence of obesity is 24% for males and 31% for females.
*The highest incidence is observed in Southeastern part of Turkey (61%), followed by mid-Anatolia (55%), Northern west (50%), and West parts (15%)
*The percentage of normal weight adults is 13.6% in females and 20% males.
*The incidence of overweight children is 24% for females and 31% for males.
*The incidence of obesity among children below age 15 is 9% for females and 12% for males.

Slide-2

*The prevalence of T2DM in adult population (35-70 y) is 14.7%
*The prevalence of Glucose Intolerance in adult population is 9.6%.
*T2DM prevalence increases with age, 50 years being the cut-off point. After age 50, T2DM prevalence reaches 30%.

Slide-3

*We have a national bariatric and metabolic surgery society in Turkey.
*I perform both metabolic and bariatric surgery.
*For bariatric surgery purposes my indication is BMI over 40
*For patients with T2 Diabetes or Metabolic Syndrome, BMI (unless over 20) is not a limitation in my surgical practice.

Slide-4

*The annual number of bariatric operations is estimated to be around 500 cases.
*I performed 76 operations within 2 years on my own (7.6%).

Slide-5

*There are no specified or certified bariatric surgeons in Turkey.
*The number of surgeons mainly doing bariatric surgery is around 10.

Slide-6

*There is no credential system in Turkey and bariatric surgery is not regarded as a specification.

Slide-6

*There is no nationwide database for sharing the pre- and post-operative data of bariatric surgery.

Slide-7

*The average cost for bariatric surgery in Turkey varies between 5000 and 20000 USD, depending on the type and location of the operative procedure.
*The government only pays 30-40% of the bill if the patient obtains a multidisciplinary council approval. (The council mainly consists of endocrinologists!)

Slide-8

*For patients with T2DM, I operate on all patients with a BMI above 20, if they meet the metabolic criteria for the operation.
*I did 4 revision bariatric surgeries. (1 anastomotic stricture, two band removals with sleeve and one band removal with BIB).
*I work at a private university and its private hospitals in Istanbul. We accept and operate on overseas patients.

Slide-9

*The main problem, also affecting my country from obesity pandemic is the so called "Coca-colonization", which refers to global standardization of refined or saccharified food.
*From my (surgical) aspect, the main problem is internists and endocrinologists who are trying to discover America once again.
*The main need is education and social awareness.

Slide-10

*Protection is more important than treatment. I personally believe that we should worldwide keep away from refined and saccharified food. However, these products are easy to keep, suitable for overseas transport and unfortunately, they are tasty.

*Each government should establish their policy for nationwide food supplies and consumption of childhood food products.
*Turkish people like to eat bread with spaghetti and/or rice. I think that we should at first educate people, than we should raise a social awareness about the global food industry, metabolic syndrome and the importance of physical exercise.
*For those with already settled metabolic syndrome, the importance and affectivity of surgical treatment should be emphasized, with particular notation on the advantages of laparoscopic surgery.

Slide 11

*From bariatric point of view, the importance of a team work has always been emphasized. I have recently moved to a new institute in Istanbul and am trying to settle my own team.
*From metabolic point of view, I operate on T2DM patients with end-organ damage. I have operated on 46 non-obese, overweight or type 1 obese (BMI=30-35) patients with T2DM. I believe that we should also emphasize and try to produce a global awareness for surgical treatment of Diabetes.

National report
Bariatric surgery in Brazil: Current status

Joel Faintuch , Francisco Karkow, Fernanda Pezzi (Sao Paulo University Medical School and Fatima Faculty, Caxias do Sul)

Introduction

Obesity is a growing epidemic not only in industrialized countries but also in the developing world. The main difference in places like Brazil is the phenomenon of nutrition transition. Till the recent past undernutrition was the main problem. The rapid shift toward excessive body weight resulted in the relatively frequent coexistence, in the same family and in the same house, of examples of the two derangements, namely undernourished children with obese parents, or the opposite association.

Antiobesity procedures were started in this country in the 1970´s, in the form of jejunoileal bypass. Multiple modalities were tested along the years, especially in Hospital das Clinicas, Sao Paulo, which was the pioneer institution, till the creation of the Brazilian Society of Bariatric and Metabolic Society (BSBMS) in 1999, by Artur Garrido Jr.

Yearly congresses have been organized since that time, and the Society counts more than 900 members including surgeons as well as allied health professionals. Current president is Ricardo Cohen. A Bulletin was created in 2000 by Joel Faintuch and Artur Garrido Jr and converted into a quarterly Journal five years later. Now the Journal has merged with the Brazilian Archives of Digestive Surgery, which also appears every three months.

Acceptance of the specialty

Until the early 1990´s just a few dozen surgeons had interest in bariatric operations and very few surgical residents had exposure to such the techniques. However after the establishment of BSBMS growth has been exponential, notably after government and private health providers accepted reimbursing the operations. At this moment such procedures are very well established all over the country, and actively sought by obese patients. Indeed, public hospital often suffer with long waiting lines.

Surgical residents in large academic hospitals and also in certain private ones have the chance of operating bariatric candidates during their rotations, and a couple of Centers of Excellence in Bariatric Surgery has been created in Sao Paulo, with a tendency to grow towards other cities as well.

Surgical procedures

The most practiced modality in the country is the Roux-en-Y gastric bypass (RYGB), which is the first intervention recognized and funded by the Federal Social Security System. Approximately 75% of the candidates undergo this treatment, bur multiple other options are endorsed by BSBMS, namely vertical banded gastroplasty, sleeve gastrectomy, gastric banding, Scopinaro procedure and duodenal switch, along with the endoscopically placed intragastric balloon.

Patient care and hospital facilities

A national consensus signed by six surgical and clinical professional societies in 2007 established directives for most routines and indications concerning bariatric interventions, from patient selection to hospital equipment and postoperative care.

Current statistics

Brazil has roughly 190 million inhabitants of which between 2 and 4 million are morbidly obese, depending on the estimate. About 30 000 bariatric procedures are conducted each year, of which 25-300 % are payed by the Federal Social Security System, 60-70% by commercial Health Providers, and around 5 % privately financed.

Distribution of morbid obesity

A national survey under the initiative of BSBMS revealed that though morbid obesity doesn´t spare any of the regions of Brazil, distribution is not homogeneous. The two poorest areas, namely the North and Northeast, display the lowest proportion (2%). The rich Southeastern region, which includes Sao Paulo, wasn´t bad either with 2.5% prevalence. The highest rates corresponded to the Western region and to the South, both with 5% values.

As concerns the South there is a rather obvious explanation. This area is quite affordable, there is strong immigrant influence especially from Italian and German people, and the population appreciates hearty meals. The Western region was a surprise and no obvious explanation is available, though meat is particularly abundant in that area because of vast cattle-raising farms.

Metabolic surgery

In the last five years several groups have engaged in standard bariatric or tailor-made operations for non-morbidly-obese diabetics, with variable results. Animal investigations were atarted in a number of University laboratories, and Master´s as well as PhD theses are going on . Some controversy occurred when a couple of teams started performing such interventions on a routine basis. A consensus established in 2009 decided that these treatments are still experimental and should be conducted under approval of an Ethical Committee, for the purposes of scientific investigation only.

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