

## Exenatide for Treatment of Obese Type 2 Diabetes- The Townsville Hospital Experience

Durgesh Gowda, Vasant Shenoy, Usman Malabu, and Kunwarjit Sangla

The Townsville Hospital, Townsville, Queensland

**Background / Aims:** Exenatide is a glucagon-like peptide-type 1 (GLP-1) approved for treatment of diabetes. Unlike insulin it has an added advantage of lowering body weight in obese type 2 diabetics. Literature for its therapeutic usefulness in Australian population is scanty and in North Queensland is lacking despite reportedly high prevalence of diabetes, obesity in the region. The aim of the study was to document metabolic effects of exenatide in our local diabetes population. **Methods:** We conducted a retrospective review of 221 patients with type 2 diabetes mellitus treated with exenatide for 24 months at the Townsville Hospital Diabetes Clinic. **Results:** These are the preliminary results. Range (Mean) HbA1c(%) at start 7.3-13 (10.15). Latest HbA1c 6.5-10.8 (8.65). Change in HbA1c +0.7 till -3.5 (-1.4). Weight(Kg) at start 94-184 (139). Change in weight -20 till +2 (-9). **Conclusion:** The preliminary results are favourable with fall in HbA1c by 1.4% and 9 kg weight loss. These results are from a small sample of the total patients and are comparable to the studies published.

## Obesity in the Elderly Diabetic Patients: Townsville Hospital Experience

Rakesh Gilhotra<sup>1</sup>, Durgesh Gowda<sup>1</sup>, Olayiwola Otaiku<sup>2</sup>, Vasant Shenoy<sup>1</sup>, and Usman H. Malabu<sup>1</sup>

<sup>1</sup>Department of Endocrinology, Townsville Hospital, Douglas, Queensland

<sup>2</sup>Department of Gerontology, Townsville Hospital, Douglas, Queensland

**Background / Aims:** Although the increase in the prevalence of obesity among Australian diabetics (DM) generally is well documented, little information has been published specifically about the situation among older Australians living in North Queensland. This is despite the reportedly growing geriatric population in the region. The main aim of the study is to determine prevalence of obesity in the elderly subjects with DM. **Methods:** Hospital-based cross sectional study was prospectively conducted on patients admitted at the Townsville Hospital aged >70 years. Questionnaire was administered and anthropometric measurements were recorded in subjects with DM (study group) and non-DM (control group). **Results:** Data of 68 subjects were analysed comprising of 31 DM and 37 non-DM. Prevalence of obesity (BMI>25 kg/m<sup>2</sup>) was 74.7% compared with 45.9% in non-DM  $\chi^2 = 5.6$ ,  $P = 0.018$ . The mean BMI and body weight were higher in DM than in non-DM,  $28.2 + 6.7$  vs  $25.2 + 5.3$  kg/m<sup>2</sup> and  $78.5 + 18$  vs  $68.6 + 17$  kg, both  $P < 0.05$ . Gender, mean age, and prevalence of other co-morbidities were similar in both groups. **Conclusion:** We report high prevalence of obesity in diabetes elderly population. Prevention of DM may likely reduce rate of over weight in our geriatric subjects. This being pilot project further prospective studies on a larger population are needed to confirm our findings.

## An Investigation into Water Fluoridation Opinions and Knowledge of Patients Attending the JCU Dental Clinic, Cairns, Far North Queensland

Emma Basaglia, Alison Walker, Stephanie De Souza, Rajeshwari Manickam and Sarah Sieun Song

Department of Medicine and Dentistry, James Cook University, Cairns, Queensland

**Background / Aims:** Although water fluoridation has been referred to as one of the top 10 public health achievements of the 20th Century, considerable public opposition surrounds the issue. The recent change to Queensland's water fluoridation laws allowing local councils the right to decide on the use of fluoride has resulted in many areas of Queensland removing fluoride from their water supplies or remaining non-fluoridated. It is unclear if these decisions truly reflect public opinions. The aim of this study is to explore the views of the residents of the Cairns region on the issue of water fluoridation in order to gain an understanding of the opinions of peo-

ple living in a rural region of Australia. The study assesses the current level of support and opposition and identifies and documents the most common reasons for support and opposition, impact of socio-economic and socio-demographic variables and most commonly used methods of acquiring information. **Methods:** Data was collected by a ticked response survey from a cross-sectional sample of new and existing patients attending the JCU Dental Clinic, Cairns. **Results:** Information gathered in this study provides valuable data and specific information to authorities engaged in the fluoride issue, assists in improving oral health services and education in the Cairns region and fills the gap that currently exists in the literature surrounding water fluoridation in rural and remote regions of Far North Queensland. **Conclusions:** The research team is currently collecting data, so results and conclusions have not yet been formally constructed.

## The Prevalence of *Entamoeba gingivalis* and *Trichomonas tenax* in Tropical North Queensland

Kristina Thai, Christopher Franco, Duran Stander, Joel Rogers, and Jae Ryong Shon

School of Medicine and Dentistry, James Cook University, Cairns, Queensland

**Background / Aims:** *Entamoeba gingivalis* and *Trichomonas tenax* are commensal protozoa inhabiting the oral cavity shown to be in association with the presence of gingivitis and periodontitis. Previous studies have reported prevalences of *T. tenax* ranging from 12% to 32%, with *E. gingivalis* twice as common. Previous studies implementing conventional or real-time PCR have isolated the DNA of these organisms from plaque, periodontal pockets and saliva samples. This study aims to investigate the prevalence of *E. gingivalis* and *T. tenax* in populations of Northern Queensland and the association between the prevalence of these organisms and geographical distribution of participants between regions including Cairns (outer regional), rural and very rural areas. **Methods:** Following informed consent, saliva samples were collected from patients attending the JCU Dental Clinic. These were analysed using conventional PCR for *E. gingivalis* and *T. tenax* ribosomal subunits, SSU rDNA and 18s rRNA respectively. Primer sets for both protozoa were based on previous studies, EGO-1 and EGO-2 for *E. gingivalis* and TGBK-R and TGBK-F for *T. tenax*. A preliminary study utilizing probability sampling was conducted with 25 patients from the JCU Dental clinic to test validity and accuracy of method. A sample size of 400 participants was used for a confidence interval of  $p=0.05$ . Point prevalence will be measured for prevalence findings, and for the association between these prevalences and geographical distribution, the chi-squared test will be used. **Results / Conclusion:** Findings and analyses will be presented following assessment of 400 saliva samples.