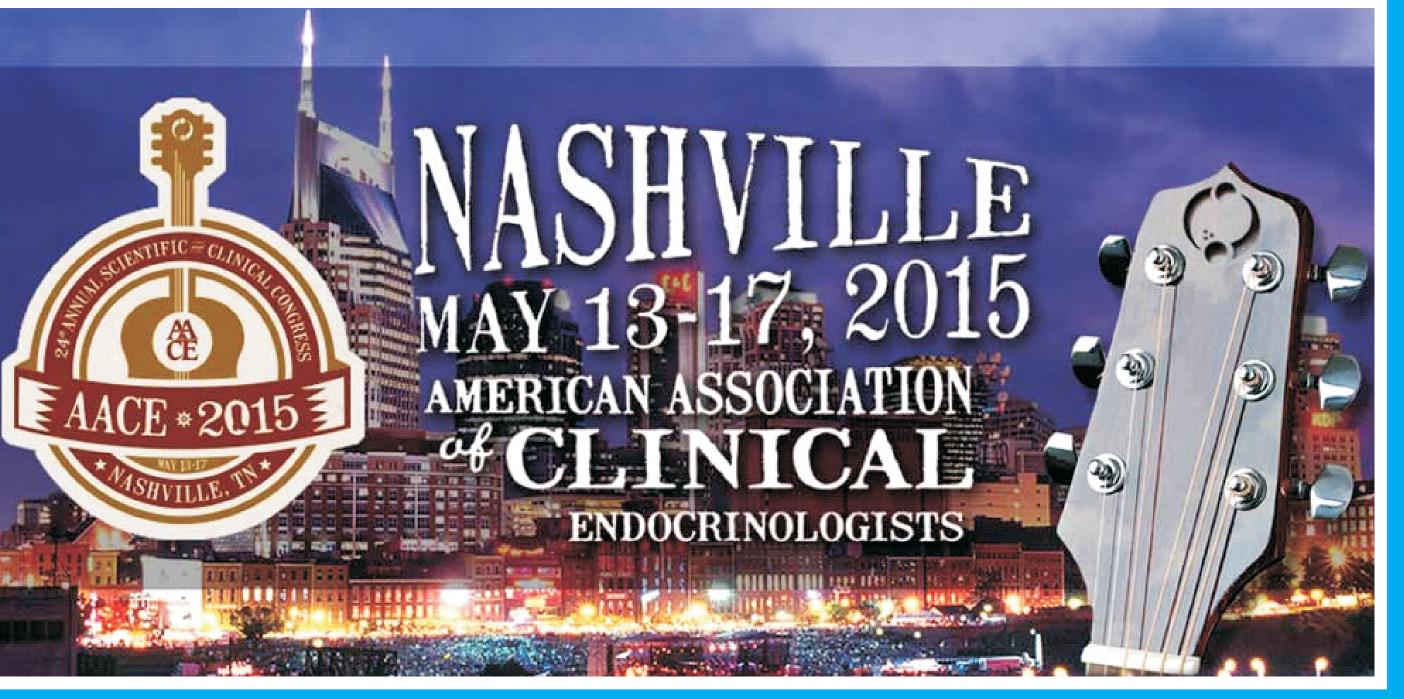


INSULIN PUMPS FOR "LIFE" VS INSULIN PUMPS FOR "LUXURY" - THE INDIAN EXPERIENCE IN TYPE 2 DIABETES

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BACKGROUND & AIMS

Insulin pumps started getting popular in India since 2004. Unlike in the West, 80% of the pump users in India are insulin requiring type 2 diabetes subjects. With increasing longevity majority of subjects with type 2 diabetes ultimately require multiple doses of insulin daily to sustain life. Pumps have gained popularity with the evidence and experience as an alternative insulin delivery device superior to conventional syringes and pens offering improvement in QOL, alleviation of neuropathic pain and flexibility of lifestyles.

Usually, initial pump training provided is on basic functions like basal, bolus & suspend. Advanced functions like insulin sensitivity factor, insulin carb ratio, bolus wizard, temporary basal & dual/square wave bolus are taught only after 1-2 months when they are more comfortable and less confused.

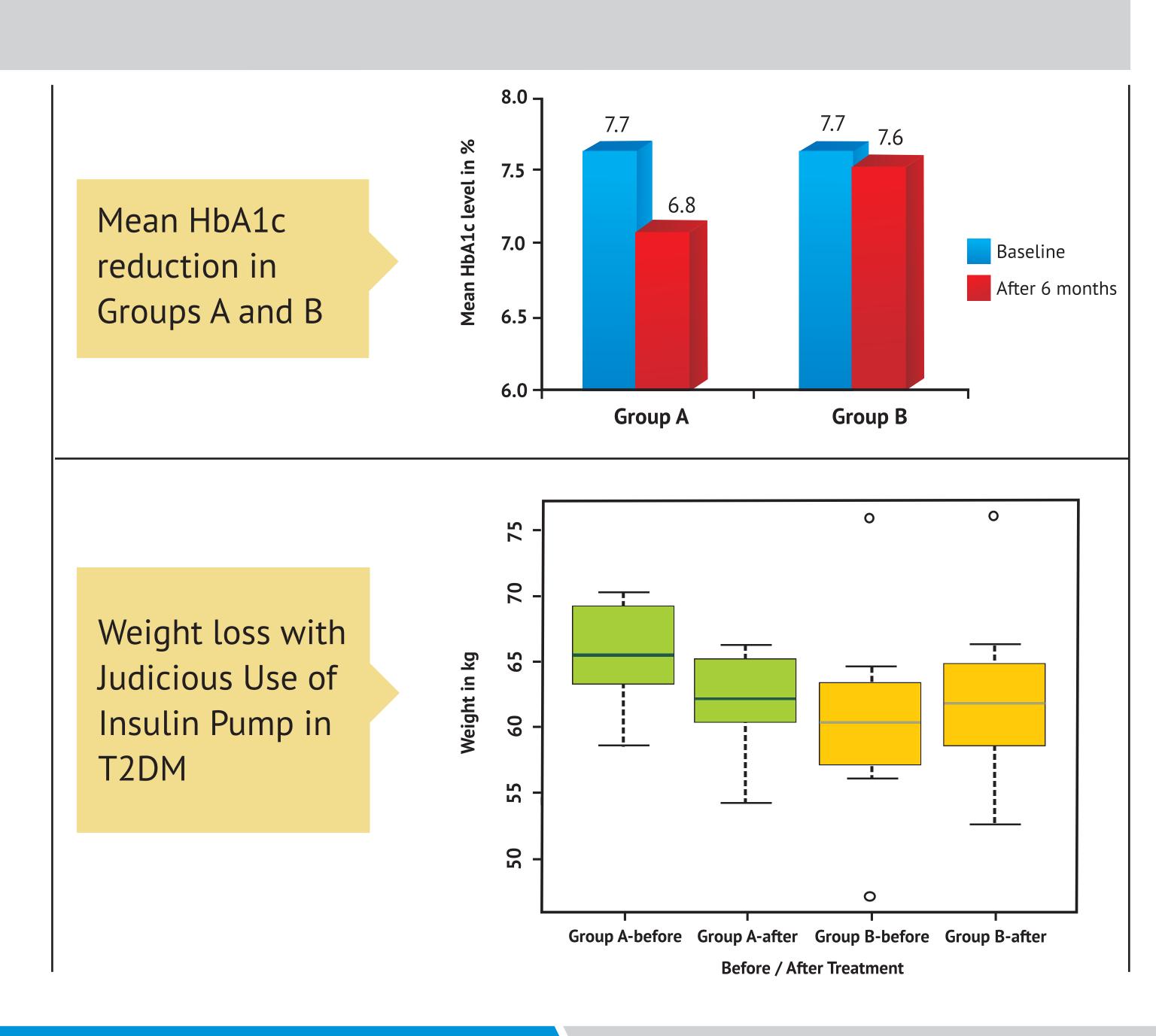
METHODS

We identified 2 groups of pump users with type 2 diabetes from our electronic medical records – Group A (n = 123) who used pumps for life and Group B (n=31) who used pumps for luxury. Group A used new knowledge judiciously and intelligently whereas group B misused it for eating and pumping more. Average baseline A1c in both groups was 7.7%.

RESULTS

Six months after advanced training. 'A' had mean A1c 6.8% and 'B' had 7.6%. In 'A', weight reduction was around 5.5% (p<0.0001, CI 1.6) compared to 'B' with a weight gain of 3.0% (p=0.12) from the baseline. 'A' had a reduction in total daily dose of insulin (TDD) by 6-8 IU compared to increase in 'B' by 8-10 IU. Thus, 'A' had significant reduction in weight, TDD, and HbA1c compared to 'B'.

'A' had followed the instructions on diet, exercise, telemedicine follow up and along with it utilised the extra pump functions judiciously for sustaining life ("Pumps for Life") whereas B exploited the features like bolus wizard, temporary basal, extended bolus etc for extra doses of insulin in accordance with food intake ("Pumps for Luxury").



CONCLUSIONS

We recommend identifying patient characteristics and modulating initial and advanced insulin pump training sessions accordingly with help of dietician, diabetic educator, psychologist etc., customizing their sessions to meet individual challenges so as to prevent inadvertent misuse of an advanced gadget for insulin infusion.

REFERENCES

- 1. Consensus Evidence-based Guidelines for Use of Insulin Pump Therapy in the Management of Diabetes as per Indian Clinical Practice. J Assoc Physicians India. Jul 2014.
- 2. Kesavadev J, Das A K, Unnikrishnan R 1st, Joshi S R, Ramachandran. A, Shamsudeen J, Krishnan G, Jothydev S, Mohan V. Use of insulin pumps in India: suggested guidelines based on experience and cultural differences. Diabetes Technol. Ther. 2010 Oct;12(10):823–831
- 3. Saboo B D, Talaviya P A. Continuous subcutaneous insulin infusion: practical issues. Indian J Endocrinol Metab. 2012 Dec; 16(Suppl 2):S259-62.