Abstract

Background:
Nasal obstruction is known to be associated with a major decrease in disease-specific quality of life, and nasal valve dysfunction can play a considerable role in nasal airflow obstruction. There are many procedures for treating such type of nasal obstruction. Evaluation of treatment results in relieving obstruction with special regard to the type of the surgery is therefore of increasing importance.

Objective & Aim:
The evaluation of the efficiency of minimal invasive valve repair for the treatment of nasal obstruction due to nasal valve stenosis in comparison with well known procedures which were the reduction of the size of inferior turbinate by coblation and sub mucosal diathermy (SMD).

Methods:
This is a cross sectional study conducted at Rizgary Teaching Hospital – Erbil from the 20th Nov 2011 to the 19th of Sept 2013. The study included 43 patients suffering from nasal obstruction for more than 6 months. The patients were divided into three groups according to the type of surgery carried out (minimal invasive valve repair (MIVR), coblation and sub mucosal diathermy (SMD) of inferior turbinate), the patients were followed for 3 months, and the data were statistically analyzed.

Results:
Patients showed highly significant difference between pre- and 1st, 30th and 90th days post-operatively total NOSE scale scores (p = .0001) And the difference between 1st and 30th and 90th days total score was also significant. While Patients treated by coblation and SMD showed no significant difference in the mean nose score (p = .705 and p = .2), postoperative morbidity was less in the minimal invasive valve repair group in comparison with coblation and SMD groups.

Conclusion:
Minimal invasive valve repair had more rapid improvement and less postoperative morbidity in comparison with coblation and SMD of inferior turbinate.

Methods and Materials

This is a cross sectional study conducted at Rizgary Teaching Hospital – Erbil from the 20th Nov 2011 to the 19th of Sept 2013. The study included 43 patients suffering from nasal obstruction for more than 6 months. The patients were divided into three groups according to the type of surgery carried out (minimal invasive valve repair (MIVR), coblation and sub mucosal diathermy (SMD) of inferior turbinate), the patients were followed for 3 months, and the data were statistically analyzed.

Results

Patients treated with minimal invasive valve repair showed highly significant difference between pre- and 1st, 30th and 90th days post-operatively total NOSE scale scores (p = .0001) And the difference between 1st and 30th and 90th days total score was also significant. While Patients treated by coblation and SMD showed no significant difference in the mean nose score between pre and immediate postoperative period (p = .705 and p = .2), however there was significant changes in the 1st and 3rd months score from the baseline (p = .011 and p = .011) and (p = .001 and p = .001), postoperative morbidity was less in the minimal invasive valve repair group in compared with coblation and SMD groups.

Discussion

The highly significant results documented by the current study run parallel to results found by Robert W. Dolan study (2010) although he compared preoperative scores and 3rd months postoperatively only. No significant results were found in the other 2 groups when comparing the pre- and immediate postoperative scores, however, all the 3 groups have significant scores after the 3rd month postoperatively. Time of pack removal was after 1 hr in 1st group (24 hr in the others) followed by no or mild reactionary bleeding, less pain and crustation. Dramatic relief of obstruction and somehow comfortable postoperative period in 1st group probably is explained by the minimum inflammatory reaction, later scar formation and the targeted area of surgery where most of widening occur at the junction of the septum and ULC.

Conclusions

Results of the current study revealed that all the three types of the carried out were significant regarding the improvement in the nasal patency but with different time scale postoperatively, minimal invasive valve repair had more rapid improvement and less postoperative morbidity in comparison with coblation and SMD of inferior turbinate.

Recommendations:
We recommend the minimal nasal valve repair for treatment of nasal valve obstruction over the other procedures as it show early improvement and less postoperative morbidity in compare with others.

References