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Title: Argon plasma coagulation in treatment of post intubation tracheal stenosis

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Body: Background and objectives:Acquired tracheal stenosis can be created by various causes.The most common cause of acquired non-malignant tracheal stenosis is endotracheal intubation,even for a short period.Argon plasma coagulation(APC) is a non-contact method of thermal hemostasis which can be used easily and fast and has low depth of penetration.Therefore,we decided to evaluate efficacy of this method in treatment of Tracheal stenosis. Methods: This study is single blinded.Subjects were patients with tracheal stenosis after endotracheal intubation who were selected by non-probability sampling in bronchoscopy unit of Masih Daneshvari Hospital.First,for each patient,a diagnostic flexible bronchoscopy was performed to identify the type,location,and severity of the stenosis.Then, under general anesthesia,patients underwent rigid bronchoscopy.After that,the stenosis was removed as possible by APC device.After two weeks,a pulmonary function test(PFT)was done to check the obstructive signs. Results: Of all 34 patients,24 were asymptomatic for more than 1 year and responded to treatment(70/6%),5 were asymptomatic for more than 10 months and less than 12 months(14/7%)and 5 did not have asymptomatic period more than 10 months,and did not respond to treatment.In follow-up PFT,FEV1 in all patients who were asymptomatic for more than 10 months (29 patients) showed a significant progress.(At the end of the period,FEV1 was more than 90% in 27 patients and 70-90% in 2 patients.) Conclusion: On the whole, although the surgical treatment remains the main treatment of tracheal stenosis after intubation,if this method is not possible for any reason,APC is useful as a safe and effective method.