HOT AND COLD TECHNIQUES OF BRONCHOSCOPIC PALLIATION

Tom G SUTEDJA*

Currently, many bronchoscopists can provide immediate palliation for patients with imminent respiratory failure caused by intraluminal tumor growth or extraluminal airway compression of the central airways. To counter significant (residual) extraluminal airway compression, stent placement is the only choice.

For immediate palliation, techniques that are easy to apply using standard instruments are of great help for interventional bronchoscopists (by heat using Nd-YAG, electrocautery and argon plasma coagulation. Nd-YAG laser is a powerful tool and excellent technique for tumor coagulation, however, special expertise is needed and this facility is relatively expensive and not easily available in every hospital. Electrocautery and argon plasma coagulation are cheap and easier to use. Its principles are simple. Both modalities are used by many specialties to control bleeding and can achieve immediate effect. They become increasingly popular in the clinical practice.

Freezing target tissue by cryotherapy causes crystalization of the cells (cartilage is cryoresistant). Liquid gas and specially designed applicators are needed. Its effect is not immediate, repetitive freezing and thawing are necessary and especially in treating large tumor mass, the procedure takes more time. Hence the preference in using rigid bronchoscope en applicators in many studies previously reported. Secondary necrosis may require a clean-up bronchoscopy.

Although all these techniques have different principles and other techniques (brachytherapy and photodynamic therapy) are also available, the ultimate choice of treatment will be influenced by the expertise of the individual bronchoscopist rather than pure on theoretical grounds. If correctly applied, all techniques may achieve the same objective, and immediate palliation using hot techniques is becoming part of the standard care in cancer patients. Current data also indicate that early stage tumors can be treated with curative intent using similar techniques, provided that accurate local staging is possible and nodal disease is absent.

* Free Üniversity, Amsterdam, The NETHERLANDS.

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