



## CASE REPORT DISCUSSION

### Case report 1

Massive haemoptysis are infrequent situations but when they occur, demand urgent and correct haemodynamic and ventilatory evaluation, to prevent airway flooding and impending respiratory failure.

Bronchoscopy has been quoted as the best instrument to localise the origin of the bleeding, the intensity of the blood flow, the ethiology of the lesion, and to define the best therapeutic approach.

In massive or intense haemoptysis initial approach has been focused on different bronchoscopic blocking procedures, pulmonary artery embolisation and as the last resort, on surgical resection of the affected lung.

When the haemorrhage is intense and when successive bronchoscopic pharmacological measures have failed, immediate bronchial tamponade allows a fast and efficient control of the situation, although sometimes only temporary.

Among different haemostatic biological products available, such as microfibrillar collagen and haemostatic gel foam, oxidised regenerated cellulose, has the additional mechanical properties most adequate for bronchial tamponade.

Other different devices for bronchoscopic tamponade have also been developed to expand the therapeutic bronchoscopic potential in these situations, including Watanabe spigots.<sup>1,2</sup>

In the present article of Nogueira et al.,<sup>3</sup> two situations of intense haemorrhage have been successfully treated by the application of oxidised regenerated cellulose using the rigid bronchoscope, confirming the 98% success in the Valipour series of 57 patients.<sup>1</sup>

Although none of these two patients developed infectious post-obstructive pneumonia, this complication can happen in up to 9% of the cases, probably as a consequence of the 7 to 14 days reabsorption delay period after the procedure, demanding an early clean-up bronchoscopy to remove residual debris and peripheral bronchial toilet.

The authors recommend the use of rigid bronchoscopy for the tamponade procedure however the *Valipour* approach,<sup>4</sup> using the flexible bronchoscope through the rigid bronchoscope, seems more adequate, allowing a more distal tamponade if the situation demands and the superior lobe bronchi tamponade, not accessible otherwise.

Although bronchoscopic tamponade can fail as a definitive or long term treatment, as happened on the second presented case, the article confirms the potential of this new and straightforward bronchoscopic procedure for the immediate control of localised bleeding of the airway, prompting for the development of specific pre-fabricated plugs for flexible bronchoscopy.

### References

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