Cost analysis of haemostatic treatment with a fibrin-based sponge versus fibrin sealant in lung surgery and liver resection in a Spanish setting.

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Abstract:

OBJECTIVES: To assess the health care resources used and estimate the costs associated with the use of a collagen sponge coated with human fibrinogen and thrombin compared with fibrin sealant to improve haemostasis in lung surgery and liver resection. METHODS: A cost-analysis of the healthcare resources used with the administration of a fibrin-based sponge and fibrin sealant was performed. Health care resource utilisation and unit costs associated with both treatments in lung surgery and liver resection was obtained from literature research. Costs included for lung surgery were drug costs, preparation and administration time and additional hospitalisation due to post-surgery pulmonary air leakage. Costs for liver resection included drug costs, preparation and administration time, drainage and hospitalisation days at ward or an intensive care unit. Drug costs were obtained from Spanish medication databases. All costs were referred to EUR 2010. Based on the healthcare resource use the mean cost per patient for each treatment was estimated. A two-way sensitivity analysis was performed determining minimum and maximum mean costs per patient. RESULTS: Mean drug costs for the fibrin-based sponge and fibrin sealant in lung surgery resulted in 275 and 345, respectively. Total treatment costs per patient were estimated at 376 and at 509 for the fibrin-based sponge and fibrin sealant. In liver resection mean drug costs resulted in 550 for the fibrin-based sponge and in 690 for fibrin sealant, respectively. The associated total treatment costs per patient added up to approximately 5725 for the fibrin-based sponge and 6148 for fibrin sealant. CONCLUSIONS: The use of a fibrin-based sponge showed benefits over the use of fibrin sealant in

lung surgery and liver resection. Less use of health care resources with the application of fibrin-based sponges versus fibrin sealant resulted in lower associated treatment costs per patient.