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eComment. Paradigm shift in surgery for massive pulmonary embolism: If not now then when?

Author: ***Anand Sachithanandan***
Serdang Hospital, Kuala Lumpur, Malaysia
doi:10.1093/icvts/ivt274

This retrospective study by Zarrabi *et al.* adds to the growing repository of contemporary evidence regarding the safety and efficacy of surgical embolectomy for massive and submassive pulmonary embolism [1]. The authors highlight the potential for chronic thromboembolic pulmonary hypertension, an important but often overlooked sequelae of suboptimal therapy which may result following anticoagulation only, or catheter directed thrombolysis due to incomplete recanalization. The significant consistent reduction in pulmonary arterial systolic pressures reported on serial studies immediately before and after surgery and on follow-up is most encouraging.

Despite improved outcomes, a surgical embolectomy largely remains a second line or last resort alternative therapy, perhaps burdened by historical outcomes. However, with the increased availability of cardiopulmonary bypass support and more detailed imaging (computed tomography and transoesophageal echocardiography), a surgical embolectomy should feature early in the treatment algorithm of any patient with a large volume central thrombus burden in the main pulmonary artery or proximal branch pulmonary arteries. Surgery should also be considered for the haemodynamically stable patient who may have features of impending right ventricular dysfunction, a known prognosticator for an embolism-related early (in-hospital or 30 day) death [2].

In carefully selected patients, an early surgical embolectomy may offer the best opportunity to rapidly and completely reperfuse the pulmonary arterial vasculature, thereby avoiding potential future complications such as chronic thromboembolic pulmonary hypertension.

Conflict of Interest: None declared

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