

citations than the less important ones. Argentina, South Africa, and Sweden had the highest average citation rates observed (Fig 2C). According to the number of published items and international cooperation, the average citation rate of these countries appeared to be disproportionately high. Further analysis revealed a tendency of a disproportionately high rate of self-citation in these countries. However, a similar tendency was revealed for most of the countries in our analysis. Thus, the average citation rate should be critically reconsidered as a measure of scientific impact, especially as the average citation rate factors into other parameters like the impact factor and H-index.

The current scientometric analysis indicates that the current parameters measuring scientific impact and quantity are not objectively reliable. We recommend that efforts should be made to establish new parameters that limit coauthorship and exclude self-citations to obtain more sustainable results.

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doi:10.1053/j.jvca.2009.05.010

Monitoring Anticoagulation of Patients With Antiphospholipid Antibodies on Cardiopulmonary Bypass

To the Editor:

Regarding the case report published in the October 2008 issue of the *Journal* titled "Antiphospholipid Syndrome: Intraoperative and Postoperative Anticoagulation in Cardiac Surgery,"¹ I would like to comment on techniques used for monitoring anticoagulation during cardiopulmonary bypass (CPB). I agree with the authors that there is no consensus regarding anticoagulation on bypass in antiphospholipid syndrome (APLS) patients. The majority of information is carried through case reports. Our institution has based its management on information in the literature, in particular case reports, and hematologic opinion. I also wish to raise the point that the monitoring dilemma

exists in patients with antiphospholipid antibodies and is not isolated to those diagnosed with the syndrome.

Anti-Xa levels are considered the gold standard. This test is not "point of care" and requires coordination with the laboratory staff. Our institution can typically obtain these results within 10 to 20 minutes. Currently, the combination of empiric doubling of activated coagulation time (ACT) and concurrent secondary confirmation of anticoagulation via anti-Xa levels are used. Raymond et al² have shown a lack of correlation between ACT and anti-Xa results during CPB, and this also has been shown in case reports.^{3,4} We confirm heparin activity with anti-Xa levels and aim to repeat these hourly on bypass or more regularly if initial levels are lower than anticipated. Two patients managed with this technique showed adequate anticoagulation with no thrombotic sequelae. One of these patients had a baseline ACT of 210 seconds. A heparin dose of 350 U/kg established an ACT of >1,500 seconds with an anti-Xa level of 6.5 U/mL. Another patient showed a rapid decline of ACT while on CPB. The initial ACT had increased from a baseline of 152 seconds to 607 seconds after 400 U/kg of heparin with anti-Xa of >7 U/mL. After 90 minutes on CPB, the ACT was 474 seconds, and a further dose of heparin provided adequate anticoagulation confirmed with anti-Xa levels of >7 U/mL.

The Hepcon system (Medtronic, Inc, Minneapolis, MN) is unavailable at my institution and neighboring cardiac units. It has been suggested that concentration does not measure heparin effect and that anti-Xa levels are thus recommended.⁵

Additionally, we can document the use of the antifibrinolytic tranexamic acid (TxA) in both of our patients. Prophylactic bolus doses of 20 to 30 mg/kg were given pre-CPB. A case report has documented the use of ϵ -aminocaproic acid (EACA) in this patient group for cardiac surgery.⁶ Its use is controversial because of the thrombotic tendencies of APLS. East et al⁶ justified the use of EACA by arguing that the site of action differs from that of the antibodies causing procoagulation states in APLS. EACA and TxA are lysine analogs and competitively inhibit plasminogen activation, therefore inhibiting fibrinolysis.

I speculate that this group of patients requiring CPB will continue to be managed on a case by case basis until the overall numbers are significant enough to combine.

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Coopdech Bronchial Blocker Is Useful in Abnormalities of the Tracheobronchial Tree

To the Editor:

We recently read the interesting study by Dumans-Nizard et al¹ in the *Journal*, and would like to present our experience with bronchial blockers. The Coopdech endobronchial blocker (Smiths-Medical, Barcelona, Spain) has recently been introduced in Europe.²⁻⁴ A multiport adapter allows ventilation and introduction of both a fiberoptic bronchoscope and a bronchial blocker (Fig 1). The distal end has an angle of 20°. We present a case in which an Arndt endobronchial blocker (William Cook Europe A/S, Bjaeverskov, Denmark) was abandoned, and a Coopdech was inserted uneventfully.

A 68-year-old man was scheduled for left upper lobe resection for tumor recurrence after successful treatment of a right upper lobe carcinoma (T3N1M0) 3 years earlier by chemother-

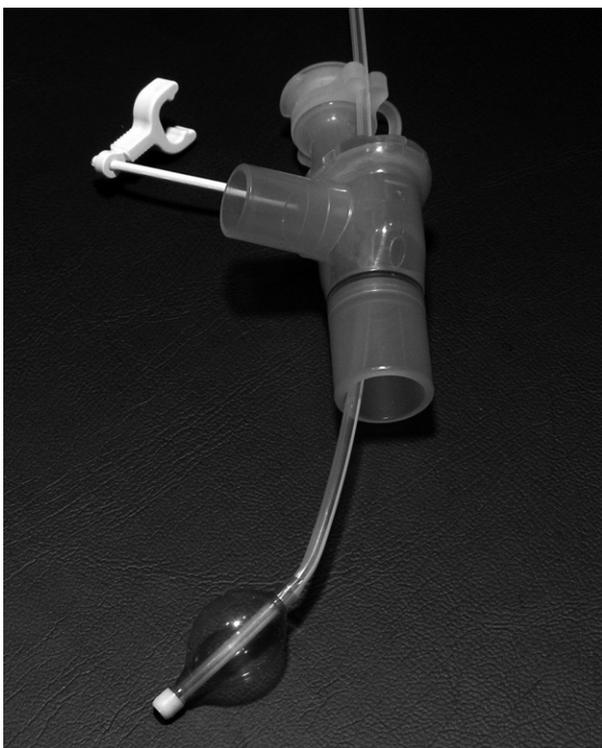


Fig 1. A Coopdech bronchial blocker. A multiport adapter and deflected tip.



Fig 2. A chest x-ray of the patient. Note the loss of volume in the right hemithorax and the 90° angle of the trachea and right bronchus.

apy and radiotherapy. A follow-up chest x-ray showed a 5-mm left upper lobe mass and loss of volume in the right hemithorax (Fig 2), probably because of postradiotherapy fibrosis.

For thoracotomy, the patient was easily intubated with a single-lumen endotracheal tube (8.5 mm). Blockade of the left lung was attempted with a no. 9 Arndt endobronchial blocker, but it met resistance when it was advanced. We tried to slip the blocker along the left side of the bronchoscope and to approach the tube near the left mainstem bronchus, but these maneuvers were unsuccessful. After 22 minutes, we replaced the Arndt with a Coopdech blocker, which was pushed and turned into the left mainstem bronchus within 3 minutes. Surgery proceeded uneventfully.

Double-lumen tubes and bronchial blockers are difficult to insert when tracheobronchial tree abnormalities are present. We have been using Arndt bronchial blockers since 2003 and have wide experience with them,⁵ but an advantage of the Coopdech device is the deflected tip and a simple torque mechanism that facilitates insertion. The Coopdech is similar to the Fuji Uniblocker, and although Narayanaswamy et al⁶ have compared 3 bronchial blockers versus double-lumen tubes, they have not studied the insertion feasibility. Opinions vary widely on the ideal techniques for obtaining one-lung ventilation.^{1,7}

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