

Subarachnoid aneurysm coiling under conscious sedation

Sir,

Endovascular aneurysm coiling is performed mainly under general anaesthesia (GA). Here, we report our anaesthetic management of a patient with high-risk cardiac disease who had to undergo a coiling of an unruptured subarachnoid aneurysm. Our patient was a 64-year-old male with history of triple vessel coronary artery disease and anterior wall myocardial infarction, post coronary artery bypass graft. He also had diabetes mellitus, hypertension, chronic kidney disease and a past episode of cardioembolic stroke. He presented to our institute with a history of syncope and was diagnosed to have non-ST elevation myocardial infarction and atrial fibrillation with fast ventricular rate and was in congestive heart failure. His echocardiogram showed hypokinetic apex, anterior and lateral wall and an ejection fraction of 25%. He developed a transient ischemic attack during the admission, evaluation of which revealed a subarachnoid aneurysm of size 9 mm by 7 mm just proximal to middle cerebral artery bifurcation. There was a high risk of the aneurysm rupturing and bleeding because the patient was on antiplatelets and anticoagulants. So, it was decided to intervene by performing an endovascular coiling of the aneurysm once the patient was stable from his present acute coronary syndrome. Three months after his discharge he was posted for coiling. At our institute, aneurysm coiling is done under general anaesthesia. Because this patient was high cardiac risk, it was decided to attempt coiling under monitored anaesthesia care with a backup plan of converting to general anaesthesia at any point of difficulty. His Glasgow Coma Scale (GCS) score was 15. Patient was counselled about the procedure and about the necessity to lie still. A large bore intravenous access and an arterial line for monitoring were placed under local anaesthesia. Under standard monitoring, patient was sedated with Inj. dexmedetomidine infusion at the rate of 0.5 µg/kg/min with Inj. fentanyl boluses titrated to effect to a total dose of 80 µg. Local anaesthetic infiltration was given at the site of puncture. The procedure lasted nearly 2 h. Heart rate and blood pressure remained near baseline levels with minimal variation. Intraoperative period was uneventful, procedure was completed successfully and patient was discharged 2 days later. GA is the accepted choice of anaesthesia for endovascular aneurysm

coiling because it offers complete immobility of the patient which is needed at the time of navigation of the microcatheter so as to avoid vessel perforation.^[1] It also offers the advantage of having a better control on the respiratory motion which can cause artifacts on imaging and is more comfortable to the patient. But the drugs used to provide GA can cause haemodynamic compromise and it is not possible to perform neurologic examination during the procedure to look for deficits. Performing these procedures under local anaesthesia or conscious sedation offers the advantage of having an awake patient who can readily report symptoms if any compromise occurs and also allows intermittent neurologic assessment. These patients might require emergency conversion to GA if any complications occur. Though monitored anaesthesia care is the preferred anaesthesia in management of thrombectomy, GA remains the choice in aneurysm coiling. Only few studies have explored the option of performing endovascular coiling under conscious sedation.^[2,3] Dexmedetomidine has several advantages and is widely used now with the advantage of opioid sparing effects.^[4,5] Having a patient with full GCS helped us to perform this procedure under sedation because it requires a good understanding to lie still by the patient. To the best of our knowledge this is the first report from India.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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