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## Chronic bifascicular block in a geriatric patient presenting for elective surgery. How prepared can we be?

Sir,

With increase in the geriatric population, anaesthesiologists face the challenge of anaesthetising older patients with rare conditions.<sup>[1]</sup> The incidence of bifascicular block is almost 17% in patients of age more than 80 years and is diagnosed by the presence of complete right bundle branch block along with left anterior or posterior hemifascicular block or complete

left branch block alone.<sup>[2]</sup> The risk of progression to complete heart block (CHB) is remote and hence insertion of temporary pacing is not warranted in these asymptomatic patients. However, there is a dilemma whether to initiate temporary pacing in patients who present with syncope. Recently we had an 85-yr-old patient who presented with doubtful history of syncope following, which she sustained right inter-trochantric fracture. Her pre-operative work up revealed a bifascicular block in the electrocardiogram [Figure 1]. Albeit the history of syncope, cardiologists deferred temporary pacing and suggested pharmacologic methods for intraoperative episodes of bradycardia.

She was posted for proximal femoral nailing under spinal anaesthesia with bupivacaine and fentanyl

combination to reduce the level of sympathetic blockade. Bupivacaine itself has arrhythmia inducing potential, predominant changes include prolonged QRS duration and lengthening of PR interval. It is especially significant in patients who have conduction defects.<sup>[3]</sup> In addition to the usual operating room preparation, (which includes preparing the defibrillator), we also placed stick on paddles to facilitate transcutaneous pacing should the need arise. Also other emergency drugs like adrenaline, atropine, isoprenaline, dopamine, dobutamine and milrinone were kept ready. She remained stable through the surgery and post-operative period. By maintaining a sensory level below T10, we ensured that there were minimal haemodynamic disturbances intra-operatively.

Though our patient had an uneventful intra-operative course, there are incidences of progression to complete heart block in these patients with chronic bifascicular block especially those patients who present with syncope. Martí-Almor *et al.*<sup>[4]</sup> studied 263 patients with chronic bifascicular block. They analysed clinical, electrocardiographic and electrophysiologic variables to identify predictors for progression of bifascicular block to significant atrioventricular block. They identified presence of syncope, structural heart disease and renal disease as predictors of progression to atrioventricular block. Block progression to CHB though rare cannot be totally ruled out. CHB if it does occur could be quite disastrous and initiating temporary venous pacing would be very difficult in the situation. The availability of external non-invasive pacing (transcutaneous and transoesophageal) may preclude the need for transvenous pacing, which itself might have adverse consequences in these elderly patients.<sup>[5]</sup> Transcutaneous pacing is one of the techniques of external non-invasive pacing

and is an important alternative when emergency transvenous pacing is immediately not available. We had placed stick on paddles to enable cutaneous pacing had the patient progressed to CHB or severe bradycardia. It should be remembered that patient might need deep sedation and analgesia to tolerate transcutaneous pacing and the necessary drugs and equipments should be available.

To conclude, bifascicular block in elderly patients can be common and the incidence of progression to CHB though rare is not impossible. Meticulous pre-operative work up and intra-operative preparedness to monitor and manage any adverse events will ensure a safe peri-operative period for these patients. More emphasis cannot be made on preparedness and vigilant monitoring.

#### 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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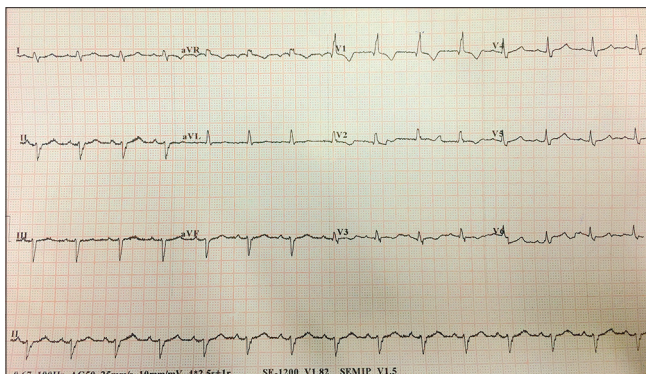
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**Figure 1:** ECG showing bifascicular block

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