



## Letter to the Editor

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# Anesthetic management of a parturient with Behcet's disease and suspected arrhythmogenic right ventricular dysplasia

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We present the anesthetic management of a 38-week parturient with Behcet's disease (BD) complicated by a suspected arrhythmogenic right ventricular dysplasia (ARVD) undergoing labor epidural analgesia. A 31-year-old nulliparous patient with BD was hospitalized and labor induction was started. Twenty-four hours later after misoprostol administration, active labor began and the patient was admitted in the delivery room. On request, epidural analgesia was performed without complications. Although a spinal anesthesia for urgent cesarean section and epidural anesthesia for endovascular repair of abdominal aortic aneurysms have been already presented in the literature [1], this is the first report describing epidural analgesia for vaginal delivery in a patient with BD and suspected ARVD.

The patient was referred to the Anesthesia Preadmission Clinic at 35 weeks of gestation for suspected ARVD complicating BD. She weighed 67 kg and was 156 cm in height (body mass index: 27.57 kg/m<sup>2</sup>). At 4 years of age, she was diagnosed with BD characterized by oral and genital ulcers, folliculitis, erythema nodosum, and bowel inflammatory disease, and at 15 years of age, she was diagnosed with thrombosis in her arm. At 16 years of age, electrocardiogram (ECG) stress test for competitive sports showed T-negative waves from V1 to V4 and non-sustained ventricular tachycardia, and ARVD was suspected. A definitive ARVD diagnosis on cardiac magnetic resonance imaging (MRI) or endocardial biopsy has never been made. The patient's ECG showed mild apical hypokinesia of the right ventricle and nonspecific hypoechoic pericardial image beside the right ventricular apex. The cardiology center where she was treated since her teen ages suggested an elective cesarean section despite the suspected diagnosis of ARVD. The patient presented with gastrointestinal symptoms, oral ulcers, and arthralgia for which she was started on steroids (prednisone 25 mg) in the 33rd week of gestation, which improved the symptoms. She had mild dyspnea without other cardiovascular symptoms since the previous two weeks. At 35th week of gestation, cardiologic and rheumatologic evaluations were planned. Rheumatologic consultation confirmed current steroid therapy and did not show any contraindication for vaginal delivery. After a 12-lead ECG showing sinus rhythm and T waves anomalies in the inferior leads, transthoracic echocardiogram showing normal systolic function (ejection fraction 66%), with limited lower septum akinesia and right ventricle middle-apical slight ectasia with tricuspid annular plane systolic excursion of 22 mm, and 24-hour Holter ECG showing infrequent ventricular and supraventricular ectopic beats, cardiological consultation concluded that in the absence of an obvious arrhythmic burden and without clear MRI signs of ARVD, there were no cardiologic contraindications for vaginal delivery. The patient was discharged, and hospital-

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ization at 38 weeks for labor induction was planned.

After hospital readmission at 38 weeks, anesthesiologic assessment was performed. It focused on systems potentially affected by BD, such as the respiratory system, nervous system, and cardiovascular system, given the patient's medical history. No difficulties were predicted in airway management, and no pathological findings were detected on neurological assessment. Cardiac involvement partially confirmed on previous cardiologic consultation did not show any contraindication to epidural analgesia. Preoperative blood results were within the normal ranges. The patient requested epidural analgesia, which was performed at the first attempt at the L3–4 level with an 18 G Tuohy needle. An epidural catheter was inserted, and 20 ml of 0.1% ropivacaine and 10 µg of sufentanil were administered. Adequate analgesia was achieved in 15 minutes. After 2 hours, with complete cervical dilatation, 15 ml of 0.15% ropivacaine was administered, and the delivery was carried out uneventfully after 30 minutes. The postpartum period was uneventful. During puerperium, 12-lead ECG, transthoracic echocardiogram, and Holter-ECG substantially confirmed prepartum results, except for rare ventricular ectopic beats, and beta-blockers was prescribed. The patient was discharged with the baby, 5 days after delivery, in good health. Three weeks later, she reported no neurological or cardiologic complications or skin changes at the sites of intravenous cannula or epidural catheter placement.

BD is a chronic inflammatory disorder characterized by widespread vasculitis with recurrent oral and genital ulcers, ocular symptoms, and musculoskeletal, neurological, cardiac, pulmonary, and gastrointestinal system involvement. 'Neuro-Behcet' [2] is a difficult diagnosis, so neurological life-threatening involvement cannot be totally excluded. Cardiac involvement may occur as endocarditis, myocarditis, pericarditis, intracardiac thrombosis, endomyocardial fibrosis, and valvular diseases [3]. Endomyocardial involvement typically manifests as fibrosis on the right and/or left side of the heart [4]. Pregnancy has a positive effect on BD. Muco-cutaneous ulcerations are the most common flares [5].

A planned anesthesia management for a BD patient with endomyocardial involvement is challenging and with focus on airway, hemodynamics, and possible neuraxial manifestations can provide a favorable outcome. Airway management could be difficult owing to the oropharyngeal soft tissue ulcerations. Neuraxial techniques should be considered in patients without clinical signs or history of central nervous system involvement. Once BD has been diagnosed, accurate cardiovascular evaluation should be performed to exclude pericarditis, endocarditis, intracardiac

thrombosis, myocardial infarction, endomyocardial fibrosis, and myocardial aneurysm.

In conclusion, epidural analgesia was safe and effective for our patient with BD, but anesthetic management should be performed based on the case, considering all implications of BD.

## Conflicts of Interest

No potential conflict of interest relevant to this article was reported.

## Author Contributions

Pietro Paolo Giuri (Conceptualization, Writing—original draft)  
 Gian Luigi Gonnella (Conceptualization, Supervision, Writing—review & editing)  
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