Original Research

Postpartum Internal Carotid and Vertebral Arterial Dissections

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OBJECTIVE: Headache and neck pain are common postpartum symptoms. However, these symptoms can rarely be associated with internal carotid artery and vertebral artery dissections. We aimed to review five cases of postpartum cervical artery dissection and to review the clinical course of previously reported cases.

METHODS: Patients with postpartum dissections diagnosed at our institution since 2005 were identified through a database maintained by the senior author, and their clinical data were reviewed. Additionally, a literature search for previously reported cases was performed, and the clinical data in those reports were reviewed.

RESULTS: Five patients presented with cervical artery dissections within 6 weeks postpartum. Four patients had delivered vaginally and one delivered by emergent cesarean. Headache and neck pain were the primary presenting symptoms of all five patients. Four patients demonstrated neurologic symptoms, and one had development of stroke. Two patients had single internal carotid artery dissections, one patient had bilateral dissections of the vertebral artery, and two patients had dissections in the internal carotid artery and vertebral artery. All patients were treated with either anticoagulation therapy or antiplatelet therapy. Two patients required endovascular stenting. Four of five patients returned to neurologic baseline after treatment. A literature search yielded 27 previously reported cases, with similar clinical characteristics of older reproductive age, presentation days to weeks from delivery, and recovery to neurologic baseline in the majority of patients.

CONCLUSION: Postpartum cervical dissections are rare occurrences that require prompt diagnosis to prevent long-term neurologic deficits. Individualized management strategies include medical treatment (anticoagulation therapy, antiplatelet therapy, or anticoagulation and antiplatelet therapy) and endovascular recanalization.

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Cervical internal carotid artery and vertebral artery dissections present with neck pain and headache in 60–90% of cases.[1–4] Headache, however, is a common symptom in the postpartum period and may be attributable to muscle tension or strain, dehydration, sleep deprivation, preeclampsia, or complication of lumbar puncture, among other etiologies. In contrast, more serious and life-threatening conditions such as cerebral venous sinus thrombosis, reversible cerebral vasoconstriction syndrome, posterior reversible leukoencephalopathy, subarachnoid hemorrhage, and, rarely, cervical arterial dissection have been reported as causes of postpartum headache and can be associated with severe neurologic sequelae in otherwise young, healthy patients.[5–7] For these reasons, clinicians involved with postpartum patients should be familiar with the presentation and management strategies for these more uncommon diagnoses.

Although cervical arterial dissections are a common cause of ischemic stroke in people during the fifth decade of life,[1,8] reports of this phenomenon in healthy postpartum patients are rare,[5,9–13] and diagnosis can be prolonged or delayed because of a low index of suspicion. Early recognition of cervical dissections is important so that treatment may be initiated before complete vessel occlusion or embolic sequelae and to avoid serious and potentially life-threatening neurologic deficits.

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Here, we present five patients with postpartum cervical internal carotid artery and vertebral artery dissections diagnosed and managed at our institution over an 8-year period and review the current literature regarding diagnosis and management of these dissections.

MATERIALS AND METHODS

Cases of postpartum cervical artery dissection were identified utilizing a database maintained by the senior author (A.M.M.) containing data for all patients who underwent cerebral angiography or who received neurovascular care at our tertiary care center since 2005. Patient medical charts, radiographic studies, endovascular procedures, obstetric history, and clinical follow-up were reviewed retrospectively. Variables recorded included age, comorbid conditions, onset of symptoms, description of symptoms, type of labor and delivery, blood pressure during the peripartum period, radiographic studies obtained, medical, surgical, or medical and surgical treatment used, length of follow-up, and clinical status at last follow-up.

A literature search was performed in PubMed (1966–2013) for all previously published case reports of postpartum cervical artery dissections. The following search terms were used: "postpartum cervical dissection," "postpartum artery dissection," "postpartum dissection," "postpartum carotid dissection," "postpartum vertebral dissection," "pregnancy cervical dissection," and "pregnancy artery dissection." Available clinical data regarding the peripartum course, the presentation of dissection, the treatment modality, and long-term outcome of these reported cases were reviewed for comparison with the cases from our own institution.

Statistical analysis was completed using JMP 10.0 statistical software package. Standard mean, median, and standard deviations were calculated regarding demographic information. Case series and reports do not require Tufts Medical Center Institutional Review Board approval.

RESULTS

Between January 2005 and November 2013, five cases of postpartum cervical arterial dissection were identified. During this time period there were 10,707 births at the same center. Patients had an average age of 33.4 ± 5.32 years (range 29–39 years) and presented an average of 18.4 days after delivery (range 0–53 days). Four patients delivered vaginally and one underwent an emergent cesarean delivery without labor. The second stage of labor was prolonged (4 hours) in one of the vaginal deliveries but was normal in the other patients (8–43 minutes). Systolic blood pressure was mildly elevated in three of five patients. No patient had a history of recent head or neck trauma, known connective tissue disease, or other medical condition predisposing to cervical artery dissection. Table 1 depicts patient characteristics.

Headache and neck pain were the main symptoms of all five patients. Four patients demonstrated additional neurologic symptoms on presentation (Table 1). One patient had a concurrent subarachnoid hemorrhage diagnosed and one patient had stroke diagnosed. Two patients had sole internal carotid artery dissections, one patient had bilateral dissections of the vertebral artery, and two patients had dissections of the internal carotid artery and vertebral artery. All patients were treated with either therapeutic anticoagulation or antiplatelet therapy. In two patients, endovascular stenting of the affected vessel was performed.

In the first case, an otherwise healthy 39-year-old woman presented to the emergency department with right eyelid droop, headache, and bilateral neck pain 11 days after an uncomplicated term vaginal delivery where she had pushed for 8 minutes. Physical examination revealed normal blood pressure, right-side ptosis, and right-side miosis. The remainder of her neurologic examination was unremarkable. Magnetic resonance imaging (MRI) and magnetic resonance angiography (MRA) suggested a right internal carotid artery dissection, left internal carotid artery dissecting pseudoaneurysm, and left vertebral artery dissection, which was confirmed on cerebral angiogram (see Appendix 1, available online http://links.lww.com/AOG/A478). The patient was treated with therapeutic heparin anticoagulation. Endovascular stenting, which requires the use of dual antiplatelet therapy, was recommended in the setting of three-vessel disease. The patient declined endovascular therapy because of breastfeeding concerns raised by clopidogrel therapy. She was transitioned to warfarin via an enoxaparin bridge. Four repeat MRI and MRA studies demonstrated stabilization of all three dissections. However, repeat cerebral angiogram obtained 4 months after presentation demonstrated evolution of the right internal carotid artery dissection with duplication of the vessel wall and an evolving nonflow limiting left internal carotid artery dissection with a triplicated lumen. In addition, a new dissection of the right vertebral artery developed. The left vertebral artery dissection had resolved. The patient continued treatment with warfarin. Clinically, the patient experienced complete resolution of her symptoms and is being monitored with MRI and MRA at 3-month intervals.

In the second case, a 29-year-old woman presented to her primary care physician with symptoms of transient right-side weakness, sensory loss, and

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Table 1. Case Series Patient Summary

Patient	Age (y)	Time to Presentation From Delivery (d)	Mode of Delivery	Second-Stage Labor Length	Medical History	Peripartum Blood Pressures	Presenting Symptoms
1	39	11	Vaginal	8 min	Healthy	Normal	Right eyelid ptosis, headache, and bilateral neck pain
2	29	53	Vaginal	14 min	Migraines	Elevated	Right-side weakness, sensory loss, and expressive aphasia, followed by severe headache and right-side hemiplegia
3	32	0	Vaginal	4 h	Migraines	Normal	Severe headache and neck pain, followed by left-side facial droop and left arm weakness
4	39	24	Vaginal	43 min	Hypertension, hyperlipidemia	Elevated	Severe headache, left-side posterior neck pain, blurred vision, and horizontal diplopia
5	28	4	Cesarean	0 min	Healthy	Elevated	Severe headache, neck pain, bilateral leg weakness

MRI, magnetic resonance imaging; MRA, magnetic resonance angiography; ICA, internal carotid artery; VA, vertebral artery; SAH, subarachnoid hemorrhage.

expressive aphasia 6 weeks after an uncomplicated term vaginal delivery. She had pushed for 14 minutes, with intermittent elevations in her blood pressure (140/90 mm Hg). A head computed tomography scan was normal. She was treated with prednisone for suspected Lyme disease. Three days later, she presented to an outside emergency department with severe headache and right-side hemiplegia. Neurologic examination revealed slight expressive aphasia and right arm weakness. MRI and MRA demonstrated left internal carotid artery and bilateral vertebral artery dissections, in addition to diffuse perfusion abnormalities in her left hemisphere without evidence of stroke. Cerebral angiogram demonstrated minimal collateral flow from the right internal carotid artery with a severe flow-limiting left internal carotid artery stenosis (Fig. 1). The patient was maintained on flat bed rest and allowed permissive hypertension. She was treated with heparin anticoagulation and dual antiplatelet therapy (aspirin 325 mg and clopidogrel 75 mg daily), with resolution of her neurologic symptoms. However, elevation of the patient's head of the bed resulted in recurrence of her symptoms. Given this severe flow-limiting stenosis as well as bilateral vertebral artery dissections, stenting of her left internal carotid artery was recommended (Fig. 1). Repeat MRI and MRA at 1 day, 14 days, and 3 months as well as cerebral angiogram 2 months after the procedure demonstrated stent patency and improvement of the bilateral vertebral dissections (Fig. 1).

In the third case, a 32-year-old woman was induced at 40 4/7 weeks of gestation because of decreased fetal movement. She underwent a vacuum-assisted vaginal delivery for a 4-hour second stage of labor with normal blood pressures throughout. She reported persistent severe headache and neck pain immediately postpartum. An MRI and MRA obtained 1 day after delivery demonstrated intraventricular air and diffuse pachymeningeal enhancement consistent with recent epidural placement, in addition to a right internal carotid artery irregularity thought to be early fibromuscular dysplasia. Her symptoms resolved after a blood patch and she was discharged. Three weeks later, she presented to an outside hospital with worsening headache, left-side facial droop, and left arm weakness. Magnetic resonance imaging and MRA demonstrated a right internal carotid artery dissection with a 5-mm thrombus and an acute middle cerebral artery territory infarct with complete occlusion of the proximal M1 segment. Treatment with low-dose aspirin was initiated. Repeat MRI and MRA 1 week later demonstrated a small extension of the stroke. She was treated with therapeutic heparin anticoagulation and

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Imaging and Findings	Treatment	Outcome
MRI and MRA: right ICA dissection, left ICA dissecting pseudoaneurysm, and left VA dissection; confirmed by cerebral angiogram	Anticoagulation	Full recovery
MRI and MRA: left ICA and bilateral VA dissections, diffuse perfusion abnormalities of the left hemisphere without stroke; confirmed by cerebral angiogram	Antiplatelet therapy, anticoagulation, endovascular stenting	Full recovery
MRI and MRA: right ICA irregularity thought to be early fibromuscular dysplasia; repeat MRI and MRA: right ICA dissection with 5-mm thrombus and acute MCA infarct	Antiplatelet therapy, anticoagulation	Residual left arm weakness and facial droop
MRI and MRA: bilateral vertebral artery dissection; confirmed by cerebral angiogram	Antiplatelet therapy	Full recovery
MRI and MRA: SAH in the basal cisterns, intraventricular hemorrhage, a left ICA dissection, epidural and subarachnoid blood in the cervical and thoracic spinal canal	Antiplatelet therapy, anticoagulation, endovascular stenting	Full recovery

was transitioned to warfarin. She required 2 weeks of inpatient rehabilitation and had residual left arm weakness and facial droop at time of discharge.

In the fourth case, a 39-year-old woman with hypertension and hyperlipidemia presented to the emergency department 3 weeks postpartum with severe headache, left-side posterior neck pain, blurred vision, and horizontal diplopia. She had pushed for 43 minutes and underwent vacuum-assisted vaginal delivery for nonreassuring fetal heart tracing. Her blood pressures were transiently elevated (140/90 mm Hg) during labor. On presentation, she had normal neurologic examination results. An MRI and MRA demonstrated bilateral vertebral artery dissections (see Appendix 2, available online at http://links.lww.com/AOG/A478). Cerebral angiogram revealed two focal areas of narrowing consistent with a healing left vertebral artery dissection and a right vertebral artery dissecting pseudoaneurysm (Appendix 2, http://links.lww.com/AOG/A478). Antiplatelet therapy was initiated with 81 mg aspirin. An MRI and MRA 1 month later demonstrated near-complete resolution of the left vertebral artery dissection and complete resolution of the right vertebral artery dissection. She remains neurologically intact.

In the fifth case, an otherwise healthy 28-year-old woman was transferred to our institution 4 days postpartum for severe headache, neck pain, bilateral leg weakness, and subarachnoid hemorrhage. An emergent cesarean delivery had been performed because of hemolysis, elevated liver enzymes, and low platelet count syndrome, with mildly elevated blood pressures (140/90 mm Hg), elevated liver enzymes, and thrombocytopenia (platelet count 58,000). Examination revealed a left-side miosis, right-side arm weakness, and bilateral lower extremity weakness. An MRI and MRA of the head and neck demonstrated subarachnoid hemorrhage in the basal cisterns, intraventricular hemorrhage, a left internal carotid artery dissection, as well as epidural and subarachnoid blood in the cervical and thoracic spinal canal accounting for her bilateral lower extremity weakness (Fig. 2). A cerebral angiogram revealed a severe left internal carotid artery dissection and pseudoaneurysm with more than 75% stenosis of the true lumen. Neurosurgery staff recommended endovascular stenting given the flow-limiting nature of the lesion (Fig. 2). However, endovascular stenting requires the use of dual antiplatelet therapy and there were safety concerns regarding antiplatelet therapy in the setting of subarachnoid and epidural bleeding. Therefore, a low-dose heparin protocol was initiated to prevent vessel occlusion. Repeat MRI and MRA of the head and neck were obtained on day 1, day 10, and day 20 after presentation, demonstrating

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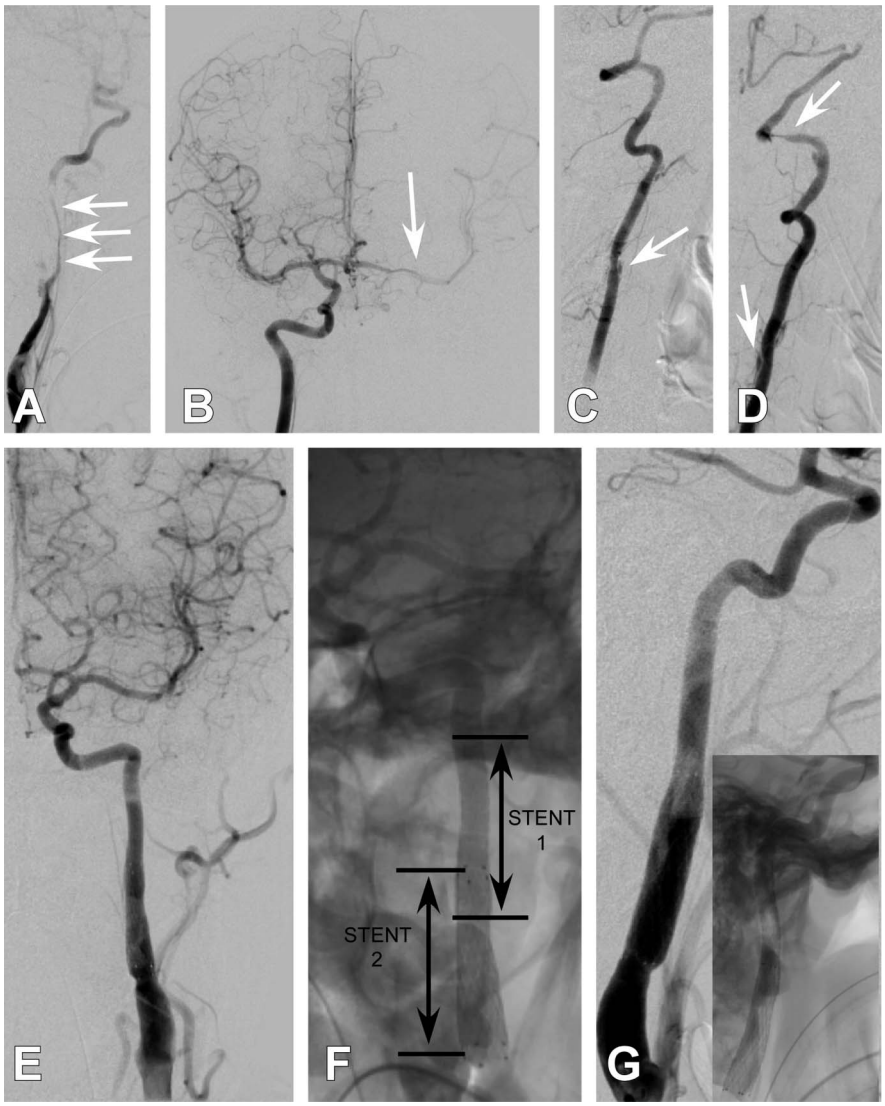


Fig. 1. Case 2. **A.** Initial lateral digital subtraction angiography (DSA) of the left internal carotid artery demonstrating a severe flow-limiting dissection (*white arrows*). **B.** Initial anterioposterior (AP) DSA of the right internal carotid artery. Note the contralateral anterior and middle cerebral arteries (*white arrow*) fill from the right internal carotid artery because of flow demand. **C.** Initial lateral DSA of the left vertebral artery demonstrating a dissection (*white arrow*). **D.** Initial lateral DSA of the right vertebral artery demonstrating two areas of dissection (*white arrows*). **E.** Intraprocedure AP DSA after deployment of two stents into the left internal carotid artery to reconstitute flow. **F.** Unsubtracted AP view of the left internal carotid artery demonstrating stent position. **G.** two-month follow-up Lateral DSA and unsubtracted view of the left internal carotid artery demonstrating recanalization of the dissection and stent position.

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continued stability of the dissection and resolution of the hemorrhage. Dual antiplatelet therapy was initiated on hospital day 16, and endovascular stenting was performed of her left internal carotid artery dissection (Fig. 2). Repeat MRI and MRA 1 month later and cerebral angiogram 3 months later demonstrated stent patency with no evidence of stroke. The patient's clopidogrel was discontinued, and she remains on daily aspirin, with recovery to neurologic baseline.

A literature search on PubMed yielded 27 previously published cases of postpartum cervical artery dissection. Available information regarding patient background, obstetric course, treatment, and outcome in these reported cases is outlined in Table 2. Combined with our reported cases, 16 out of 32 patients (47%) were of advanced maternal age, with a mean age of 34 years. Twenty-four out of 32 women (75%) presented with cervical artery dissection within 2 weeks postpartum (5–14 days). Traditional risk factors for cervical artery dissection, including prolonged Valsalva and elevated blood pressures, did not appear to be predictive. Six cases occurred in patients who underwent documented cesarean deliveries without laboring, and five cases occurred in patients with documented short second stages of labor (less than 60 minutes). Twenty-two patients (69%) did not have reported elevated blood pressure during the peripartum course. All patients were treated with anticoagulation or antiplatelet therapy. No patient required endovascular stenting. Death occurred in one patient, minor neurologic deficits persisted in one patient, and the rest of the patients experienced full clinical recovery after treatment.

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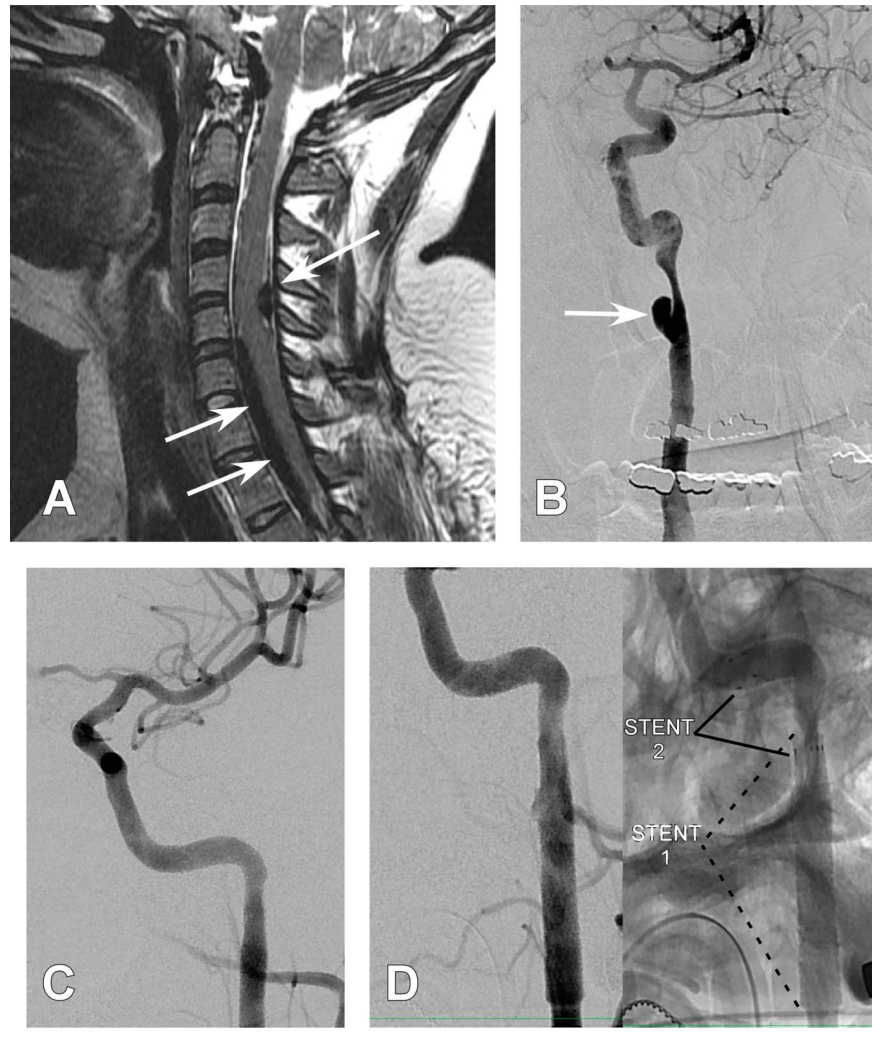


Fig. 2. Case 5. **A.** Initial T2-weighted magnetic resonance image of the cervical spine demonstrating epidural and subarachnoid hemorrhage with spinal cord compression (*white arrows*). **B.** Initial anterioposterior (AP) digital subtraction angiography (DSA) of the left internal carotid artery demonstrating dissection-related stenosis and pseudoaneurysm (*white arrow*). **C.** Intraprocedure AP DSA of the left internal carotid artery after tandem stent deployment demonstrating reconstitution of the true lumen. **D.** Three-month follow-up DSA of the left stented internal carotid artery (*left*) with unsubtracted view showing the tandem stent construct including a self-expanding intracranial-type stent (STENT 2).

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DISCUSSION

Postpartum cervical arterial dissections are rare and account for only 6% of spontaneous dissections in woman younger than age 50 years.[14] To our knowledge, 27 cases have previously been reported (Table 2).[5,8–10,12–25] Here, we present five additional cases of postpartum cervical arterial dissections from one center. This case series reports detailed clinical information regarding the peripartum courses of these patients and is unique in its description of endovascular stenting as a treatment for postpartum cervical artery dissection. In two of our patients, the low suspicion for postpartum dissection resulted in a prolonged workup and may have contributed to one patient's stroke. Although postpartum internal carotid artery dissections are rare, the consequences of delayed diagnosis and inappropriate treatment can lead to severe and permanent neurologic deficits.

The majority (60–90%) of patients with internal carotid artery and vertebral artery dissections present with headache, neck, or headache and neck pain,[1–4,25] which typically precede neurologic symptoms by hours to days.[2,25] However, headache and neck pain are common postpartum symptoms, posing a diagnostic challenge in these cases. Neurologic findings, such as an ipsilateral Horner syndrome, which occurs in 25% of cases,[1] retro-orbital pain,[26] tinnitus,[27] cranial nerve palsy,[28] or cervical nerve root involvement,[29] necessitate urgent work-up.

The mechanism of peripartum or postpartum cervical dissection remains unclear. Although connective tissue disorders have been linked to arterial dissection, most case reports of postpartum dissections occur in otherwise healthy young females. However, pregnancy-induced physiologic changes may increase the risk of arterial dissections. Increased blood volume and cardiac output may intensify hemodynamic forces

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Table 2. Characteristics and Outcome of All Previous Reported Cases

Study	Patient Age (y)	Time to Presentation From Delivery (d)	Type of Delivery*
Wiebers 1985	44	6	Cesarean for prolonged second stage of labor
Gasecki 1999	36	14	Cesarean without laboring
	34	6	Vaginal
	26	9	Vaginal, prolonged second stage of labor
	34	14	Vaginal
Ostrovskiy 2003	38	5	Vaginal
Oehler 2003	37	9	Cesarean for prolonged second stage
Abisaab 2004	35	9	Cesarean without laboring
Merrison 2004	32	7	Vaginal, prolonged second stage of labor
Hsieh 2008	32	12	Cesarean without laboring
Waidelich 2008	36	4	Vaginal, second stage of labor lasting 20 min
Arnold 2008	41	18	Not reported
	35	5	Not reported
	38	8	Not reported
	27	11	Not reported
	38	7	Not reported
	34	7	Not reported
Roche-Nagle 2008	28	10	Cesarean for prolonged second stage of labor
Gdynia 2008	35	21	Not reported
Dasgupta 2010	24	14	Cesarean without laboring
Sharma 2010	28	2	Not reported
Soltanolkotabi 2011	41	6	Cesarean
Borelli 2011	43	11	Cesarean
	37	15	Cesarean
Stamboulis 2011	32	7	Vaginal
Baffour 2012	32	14	Vaginal, second stage of labor lasting 5 min
Hoffmann 2013	30	5	Cesarean without laboring

LICA, left internal carotid artery; RICA, right internal carotid artery; RVA, right vertebral artery, LVA, left vertebral artery.
* Unless specified, second-stage labor duration was not reported.

applied to vessel walls, and hormone-mediated changes in vasoactive substances and degradation of collagen may increase arterial susceptibility to injury.[5,8,12] In addition, the sudden decrease in estradiol and progesterone after delivery is known to directly affect vessel wall integrity,[11,30] and the hypercoagulable state induced by pregnancy may contribute to the development of thrombosis at dissection sites, which can worsen intimal tears and lead to downstream emboli.

Previously, specific features of the postpartum patient have been identified as possible risk factors for arterial dissections. Frequently, straining and Valsalva during vaginal delivery have been hypothesized to produce intimal injury leading to an increased risk of dissection.[23] However, this is not a well-established risk factor in the nonpregnant population, and dissections after short second stages of labor and cesarean delivery without labor have been reported previously (Table 2). Overall, only six of the 27 reported cases occurred in the setting of prolonged Valsalva, and an equal number of cases occurred in the absence of labor, suggesting that prolonged Valsalva does not appear to be a significant risk factor for dissection. Additionally, the initial symptoms of neck pain and headache in these patients typically occurred 1 to 2 weeks after childbirth. The temporal dissociation between Valsalva at delivery and onset of symptoms and diagnosis of cervical artery dissection suggests a different etiology (Tables 1 and 2). Another theory implicates elevated blood pressures and vascular instability from preeclampsia in arterial dissection, attributable to the increased stress on intimal linings of high-flow vessels.[8,12,15,19] However, postpartum arterial dissection appears to occur most often in normotensive patients, with only eight of 32 cases reported to involve elevated blood pressures at time of presentation (Tables 1 and 2). Thus, the etiology of postpartum arterial dissection cannot be adequately explained by Valsalva and elevated blood pressures and, importantly, the diagnosis should not be excluded in patients on the basis of normal blood pressures, in patients with short second stage of labor, or those patients who did not labor. Some authors have suggested that repeated head turning to the same side during breastfeeding may predispose one to dissection of a cervical artery.[17] Additionally, a large proportion of the reported cases occurred in women of advanced

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Peripartum Blood Pressure	Affected Cervical Artery	Treatment
Not elevated	LICA	None
Not elevated	LICA	Anticoagulation
Not elevated	LICA	Anticoagulation
Not elevated	RICA	Anticoagulation
Not elevated	RVA	Anticoagulation
Not elevated	RICA	Anticoagulation
Not elevated	RICA, LICA, RVA, LVA	Anticoagulation
Not elevated	RICA	Anticoagulation
Not elevated	RICA	Anticoagulation
Elevated	RICA, RVA, LVA	Antiplatelet therapy
Not elevated	LICA	Anticoagulation
Not elevated	LVA	Unknown
Not elevated	RVA	Unknown
Not elevated	LICA	Unknown
Not elevated	RICA	Unknown
Not elevated	RVA	Unknown
Not elevated	RVA	Unknown
Unremarkable	RICA	Unknown
Not reported	RICA, LICA	Unknown
Elevated	LICA	Anticoagulation
Elevated	LVA	Antiplatelet therapy, anticoagulation
Not elevated	RICA	Antiplatelet therapy, anticoagulation
Not elevated	LICA	Antiplatelet therapy
Not elevated	RICA	Antiplatelet therapy
Not elevated	RICA	Anticoagulation
Elevated	RICA, LICA	Anticoagulation
Elevated	RICA, LICA	Anticoagulation

maternal age, which is associated with increased arterial stiffness. However, the majority of patients with these risk factors do not experience cervical artery dissection, so these risk factors alone are inadequate to identify women at risk.

Postpartum patients with severe headache, neck pain, or severe headache and neck pain should be evaluated with MRI and MRA of the head and neck. T1-weighted fat-saturated imaging should be considered given its increased sensitivity for detecting cervical arterial dissection. The presence of focal neurologic deficits increases the urgency of imaging, particularly because patients with dissection may be candidates for thrombolysis in the setting of acute ischemic stroke. Anticoagulation, antiplatelet therapy, or anticoagulation and antiplatelet therapy are the mainstay of treatment, although there is a dearth of prospective or randomized studies supporting this strategy.[31,32] In addition, it is unclear whether antiplatelet therapy is more beneficial than anticoagulating medications such as warfarin.[32] Endovascular therapy is recommended in specific situations, including the following: dissections with flow-limiting stenosis; "isolated hemisphere" dependence on the dissected artery for perfusion; failure of medical therapy with worsening hemodynamic-dependent neurologic symptoms or imaging findings; or multiple or bilateral arterial dissections that may progress to cause hemodynamic compromise. Endovascular stenting in addition to medical therapy was performed in two of our patients because of the aforementioned concerns, and medical therapy alone was initiated in the other three patients. Four out of five patients remain neurologically intact at follow-up; one patient has residual deficits from her dissection-induced stroke. Similarly, resolution of neurologic symptoms and deficits was reported in all but one of the previously published cases, suggesting overall good prognosis with prompt diagnosis and treatment.

Long-term prognosis appears to be favorable if diagnosis and treatment are prompt. Given the small number of reported cases in the literature, few data exist to guide recommendations for future pregnancies in these patients. However, given that previous dissection is a known risk factor for future cervical artery dissection in the nonpregnant population, women with a previous cervical artery dissection should be counseled about the risk for recurrent dissection and the possibility of resultant stroke in future pregnancies.

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