PERKÜTANÖZ KORONER ANJİOGRAFİ SONRASI GELİŞEN HEMATOM VE EKİMOTİK CİLT LEZYONLU BİR VAKA

A Case with Echymotic Skin Lesion and Hematome developing after Percutaneous Coronary Angiography

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ÖZET

Vasküler komlikasyonlar koroner anjiyografi ve perkütanöz koroner girişim sonrası gelişebilir. Femoral arter ponksiyonu vasküler erişimde en yaygın olarak kullanılan metotlardan biridir. Kompleks kardiyovasküler girişimsel işlemler sonrası (stent implantasyonu, aortik valvüloplasti, ve intraaortik balon pompası veya kardiyopulmoner baypas destek kullanımı dahil) vasküler giriş yeri komplikasyonu gelişme olasılığı artmıştır. Biz burada perkütan femoral arter girişimi yapılan hastada gelişen femoral hematom ve yaygın cilt ekimozlu bir olguyu sunuyoruz.

Anahtar kelimeler: *Vasküler komplikasyonlar, Koroner anjiyografi, Hematom, Ekimoz*

ABSTRACT

Vascular complications may develop after coronary angiography and percutaneous coronary intervention. Femoral arterial puncture is one of the most common method of vascular access. Complex cardiovascular interventional procedures (including coronary stent implantation, aortic valvuloplasty, and the use of an intraaortic balloon pump or cardiopulmonary bypass support) are associated with increased vascular access site complications. We presented a patient who had femoral hematoma and extend skin ecchymosis developed after coronary angiography.

Key words: *Vascular complications, Coronary angiography, Hematoma, Ecchymosis*

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INTRODUCTION

Risks associated femoral sheath removal include inadequate hemostasis resulting in vascular complications such as oozing, ecchymosis, hematoma, development of pseudoaneurysm, arteriovenous fistulas, thrombosis, arterial dissection, thromboemboli, and retroperitoneal bleedings. Vascular complications are responsible for significant morbidity, patient distress, duration of stay in hospital and reduced patient comfort (1). Such complications may require additional treatment including compression or thrombin injections (for a pseudoaneurysm), blood transfusions, or surgery, exposing patients to further restlessness, additional risk, longer hospital stays and having them consume additional institutional resources (2). Established risk factors for developing complication after percutan femoral intervention include female sex, older age, low weight and a small body surface area. Vascular attainment complications are the most common complications (2% to 6%) after diagnostic cardiac catheterizations. Reported to range from 11% to 65%;1-3 about 2% to 3% require surgical intervention.4 Nursing care intensity and costs are increased when vascular complications occurs. In this case, we aimed to describe the nature and importance of arterial puncture complications developed after coroner angiography and percutaneous coronary intervention.

CASE REPORT

We presented 59-year-old male patient who underwent to percutaneous coronary intervention at the right femoral region. The patient seek to medical treatment to our outpatient clinic. On his examination, he had had a small hematoma and ecchymotic skin lesion at the lower right inguinal region (Figure 1). On physical examination, pulse deficit was not detected. The patient's blood pressure was 120/80 mm Hg. Sinus rhythm was detected in electrocardiography. Hemogram and biochemical parameters were within normal ranges. There was no evidence of abnormal bleeding diathesis. The patient underwent venous and arterial color doppler ultrasonography of lower extremity. Level of the proximal right thigh, an area of about 20x7 cm multiloculated, fluid collecyions were detected in intramuscular-intermuscular compartment. The flow of right superficial femoral vein was slightly decreased due to compression of hematoma. Also the right superficial femoral artery blood flow was slightly decreased due to hematoma (Figure 1) . Arteriovenous fistula or aneurysm was not detected and femoral artery was intact.

Clinical and laboratory parameters of patient were followed. He underwent bed rest and leg elevation. Hematoma was resolved one week after the presentation. Hence, hematoma compression was resolved and femoral blood flow was restored.
During hospitalization fractionated heparin, anti-inflammatory medication, and local anti-thrombotic mucopolysaccharide polysulfate were administrated. At one month follow up, the physicial findings were all resolved.

DISCUSSION

This case study defined vascular complication which occured after percutaneous coronary intervention (PCI). Ecchymosis is the most frequent complication seen after sheath removal and increased over time. Oozing and hematoma downward tend on the time after sheath removal. Vascular complications have been recognized as an important factor associated with morbidity after PCI. The relationship between increased age and increased incidence of ecchymosis may be associated increased fragility of vasculature, resulting in increased subcutaneous infiltration (5).

These and similar other complications are more frequent. In a study by Katırcıbaşı and his colleagues with 321 patients, ecchymosis was seen to be the most common femoral vascular complication (%26.5).

A total of 63 (19.6%) patients were determined as having hematoma diameter greater than 4 cm. Ecchymosis and hematoma was seen in 59 patients (18.4%). Pseudoaneurysm requiring surgery in 19 (19.6%) patients and arteriovenous fistula was observed in 3 (0.9) patients. Femoral thrombosis never observed in this study (6).

Multiple studies have identified factors associated with an increase the risk of vascular complications during PCI procedures performed at the femoral artery. In the American College of Cardiology National Cardiovascular Disease Registry female gender, emergency procedures, sheath size, and renal failure were found to be independently predictive of increased vascular complications (7,8).

There has been a growing awareness of the importance of peri-procedural PCI bleeding, particularly because of access site complications. Over the past decade, multiple strategies were implemented to reduce vascular complications in the cardiac catheterization laboratory from procedures performed from the femoral artery, including use of fluoroscopy to guide femoral artery. Access downsizing sheath sizes use of vascular closure devices (6,9,10-13).

The incidence and trends of specific major and minor vascular complications decreased significantly for cardiac catheterization and percutaneous coronary intervention performed from 1998 to 2007.12 They also concluded that PCI performed from the femoral artery have become safer procedures in the past decade. Although these procedures are more safer, morbidity may occure after PCI as our patient.

Bed rest is maintained before and after femoral sheath lifting for 4 to 6 hours encourage healing of the arterial puncture site (14). The femoral sheath is removed when the whole blood thrombin is less than 120 seconds, usually within 4 to 6 hours after the last dose of heparin. Compression of the femoral artery after sheath lifting after a percutaneous coronary intervention procedures is a nursing responsibility in many acute and critical care environtments.

In conclusion, although PCI performed from the femoral artery have become safer in the past decade, there is a increased risk for VC after PICP. Phisicians should be aware of this complication after percutaneous intervention.

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