Radial Artery A-New-Rysm?

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Introduction: Radial artery (RA) aneurysm is a exceedingly rare aneurysm subtype. Commonly due iatrogenic while traumatic cause are rare. Hence, we are reporting a case of RA aneurysm post trauma instead of diagnosed as post operative abscess or hematoma.

Case presentation: A previously well 28 years old Indonesian male presented with painful swelling over left wrist for the past three days. He had traumatic left wrist arterial cut 30 days prior which was repaired intraoperatively. Examination reveals a huge pulsatile bluish-blackish swelling with necrotic patch over distal radial measuring 5cmx5cm with compression symptoms over medial and radial nerve distribution. Otherwise, saturation all fingers sustained ranging >95% under room air. X Ray reveals no gas shadow or bony erosion. Urgent ultrasound findings was impending rupture radial artery saccular aneurysm measuring 6cmx5cm. He was immediately referred and safely transferred to Vascular Surgery Selayang Hospital for further evaluation.

Discussion: A painful swelling post operatively might highly suggestive of infective causes unless proven otherwise. However, in this case, there were no complaint of fever, pus discharge or raised in inflammatory markers and he was well postoperatively until 3 days prior incident which point against infective cause.

Dilatation the arterial wall to >1.5 times its normal diameter define aneurysm. Normal RA diameter was 2-3mm. From case report reviewed, most traumatic RA aneurysm had delayed presentation between month to years after incident1,2. Clinical presentation varies from a locally increasing swelling to a painful mass with neurologic symptoms, pulsatile mass, and mass with necrosed skin or with a ruptured pseudoaneurysm3.

Abrupt expansion of an aneurysm and expanding way too large are more likely to rupture as it creates more dilatation and exceeded the tensile strength of the vessels as stated in Leplace law (wall tension = pressure x radius).

Conclusion: In Emergency Department, common presentations are often prioritized during the diagnostic process. However, this case illustrate that it is crucial to widened our differential diagnosis to the rarest one, since accurately diagnosed RA aneurysm will avoid serious complications such as rupture or thromboembolism.

Keywords: Radial Artery, Aneurysm

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