**Unexpected Encounters: A Tale of Penetrating Neck Trauma and Vascular Fistula.**

Authors: Mohd Nor Ikhwan Md Adzha1, Mohd Rafeek Mohd Ismail1, Zainal Effendy Zainal Abidin1.

*Affiliation: 1Emergency & Trauma Department, Hospital Sultan Abdul Halim.*

Introduction:

Traumatic injuries affecting the neck vasculature are rare but demand immediate attention due to their potential life-threatening complications. Recent studies have highlighted the diverse clinical presentations and etiologies such as high-energy blunt or penetrating trauma1.

Case:

This is a case of a 43-year-old male who presented with sudden onset of pain, swelling and bleeding at right neck while hammering steel at work. He also experienced sharp pain and tightness of right upper limb, along with hoarseness of voice. Neck examination revealed diffuse swelling at zone 1 and 2 of right neck. There was a small puncture wound at the anterior border of right sternocleidomastoid muscle with minimal oozing of blood which was stopped by direct compression. There was also palpable thrill and bruit on auscultation. Neurological examinations of upper and lower limbs were otherwise intact. Despites all the findings, the patient was hemodynamically stable and not in respiratory distress. Patient was started on intravenous drip and antibiotic and was referred to surgical and ENT team. Bedside flexible scope done by ENT team showed right vocal cord palsy with no other abnormalities. Subsequently, computed tomography angiography (CTA) was done and revealed traumatic right internal jugular vein-common carotid artery fistula communication with a radio-opaque foreign body at right foramen transversarium of C5/C6 level and focal injury at surrounding soft tissues. The patient was transferred to Hospital Kuala Lumpur for urgent surgical intervention under vascular and neurosurgery teams.

Discussion:

This case underscores the importance of vigilance in diagnosing such injuries, even in the absence of overt hemodynamic instability. Precise clinical examinations, including thorough neck and neurological assessments, are pivotal in identifying subtle signs indicative of vascular injury such as palpable thrill and bruit2. Effective clinical decision-making is vital in cases of penetrating neck injury. In cases where haemodynamic instability or presence of hard signs, the patient should bypass imaging and immediately undergo operative exploration3. However this practice may vary according to availability of resources at local setting.

Conclusion:

This case emphasizes the importance of precise clinical evaluation in managing rare penetrating neck trauma. Timely intervention facilitated a favourable outcome, highlighting the significance of a multidisciplinary approach in optimizing patient care.

Keywords: traumatic, vascular, fistula.

References:

Patel J, Huynh TJ, Rao D, Brzezicki G. Vascular Trauma in the Head and Neck and Endovascular Neurointerventional Management. J Clin Imaging Sci. 2020.

Isaza-Restrepo A, Quintero-Contreras JA, Escobar-DiazGranados J, Ruiz-Sternberg ÁM. Value of clinical examination in the assessment of penetrating neck injuries: a retrospective study of diagnostic accuracy test. BMC Emerg Med. 2020.

JL Nowicki, B Stew, E Ooi. Penetrating neck injuries: a guide to evaluation and management. Ann R Coll Surg Engl 2018.