

# UNITED AT THE FOREFRONT: THE CRITICAL ROLE OF A MULTIDISCIPLINARY TRAUMA TEAM IN MANAGING EXSANGUINATING PELVIC FRACTURES

Kenny Gene Salvador, MD, DPBEM<sup>1</sup>, Benedict Edward Valdez, MD, DPBS, FPSST<sup>2</sup>, Faith Joan Mesa-Gaerlan, MD, MS, FPCEM<sup>3</sup>, Pauline Convocar, MD, FPCEM<sup>4</sup>

<sup>1</sup> Fellow-In-Training, Acute Care and Trauma, Emergency Medicine, Southern Philippines Medical Center, <sup>2</sup> Chairman, Institute of Acute Trauma & Critical Care Surgery, Southern Philippines Medical Center, <sup>3</sup> Chairman, Acute Care & Trauma, Department of Emergency Medicine, Southern Philippines Medical Center, <sup>4</sup> Consultant, Acute Care & Trauma, Department of Emergency Medicine, Southern Philippines Medical Center



## INTRODUCTION

Pelvic fractures, known for their high mortality rates, necessitate a swift and coordinated medical response. Activating a multidisciplinary trauma team is crucial for managing severe injuries, ensuring systematic trauma care, and immediate resuscitation. This case illustrates how a timely, multidisciplinary trauma team response led to the survival of a 33-year-old woman with a life-threatening pelvic fracture.

## CASE DESCRIPTION

The patient, a 33-year-old woman, suffered a pelvic injury following a side collision while riding a tricycle. Ejected from the vehicle, she sustained a profusely bleeding wound in her right inguinal area. Immediate prehospital care was provided, and she was transported without prior notification.

Upon arrival, the Emergency Medicine promptly activated an entire Trauma Team. Trauma and orthopedic surgeons immediately assembled, with notifications sent to the blood bank and operating room for potential massive transfusion and surgery. The patient's ongoing hemorrhage from the injury and pelvic instability prompted the initiation of Damage-Control Resuscitation measures. Persistent hemodynamic instability necessitated the implementation of the Massive Transfusion Protocol.

After a negative e-FAST exam and confirmation of an unstable pelvic fracture through radiography, selective angiographic embolization and coiling of arteries stabilized her condition. Due to the extensive injury, subsequent surgeries included applying an external pelvic fixator, hip disarticulation, and right hemipelvectomy. Postoperative care involved hyperbaric oxygen therapy, wound debridement, and pain management. She was discharged after two months, recovered, and determined to maximize her overall functionality.

## DISCUSSION & CONCLUSION

The swift activation of the Trauma Team, adherence to protocols such as the Massive Transfusion Protocol, and coordinated teamwork were pivotal in managing this case of unstable pelvic fractures which generally has high rate of mortality and morbidity. The simultaneous application of Damage-Control Resuscitation, Massive Transfusion Protocol, and Angioembolization allowed for the stabilization of a high-mortality injury, enabling subsequent definitive surgical repair. The effective use of resources, including interventional radiology for embolization, underscored the team's proficiency and highlighted the critical role of well-coordinated trauma care. This case emphasizes the value of adhering to established protocols and demonstrates how continuous team training and protocol refinement contribute to improving emergency care outcomes.

In conclusion, the Trauma Team's rapid activation served as a catalyst for the timely implementation of life-saving interventions such as Damage-Control Resuscitation, Massive Transfusion Protocol, and Angioembolization. This cohesive approach was essential in transforming an otherwise fatal injury into a survivable event, underscoring the indispensable role of early trauma team involvement in complex emergency care scenarios.



Fig. 2 - Baseline pelvic radiography taken in AP view. A comminuted fracture is evident in the bilateral pubic rami, affecting both the superior and inferior regions, with suspicion of extension into the acetabulum and hip joint

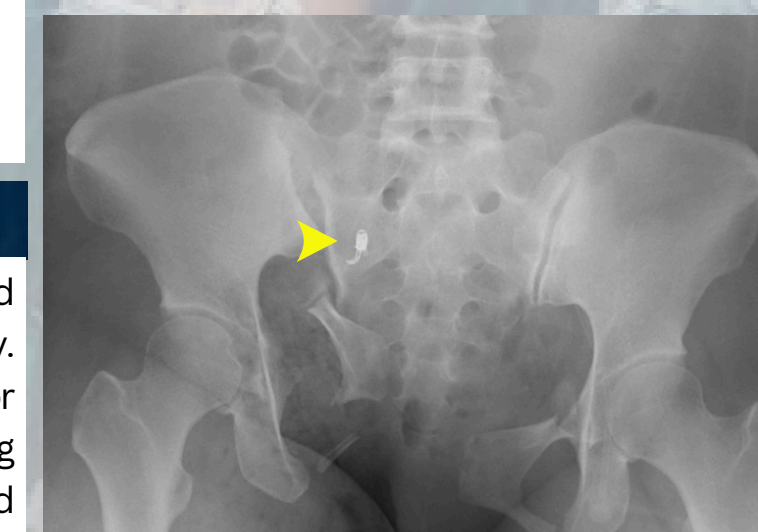


Fig. 3 - Pelvic radiography taken in AP view after transarterial angioembolization of the right internal artery. Yellow arrow pointing the coils used for embolization.

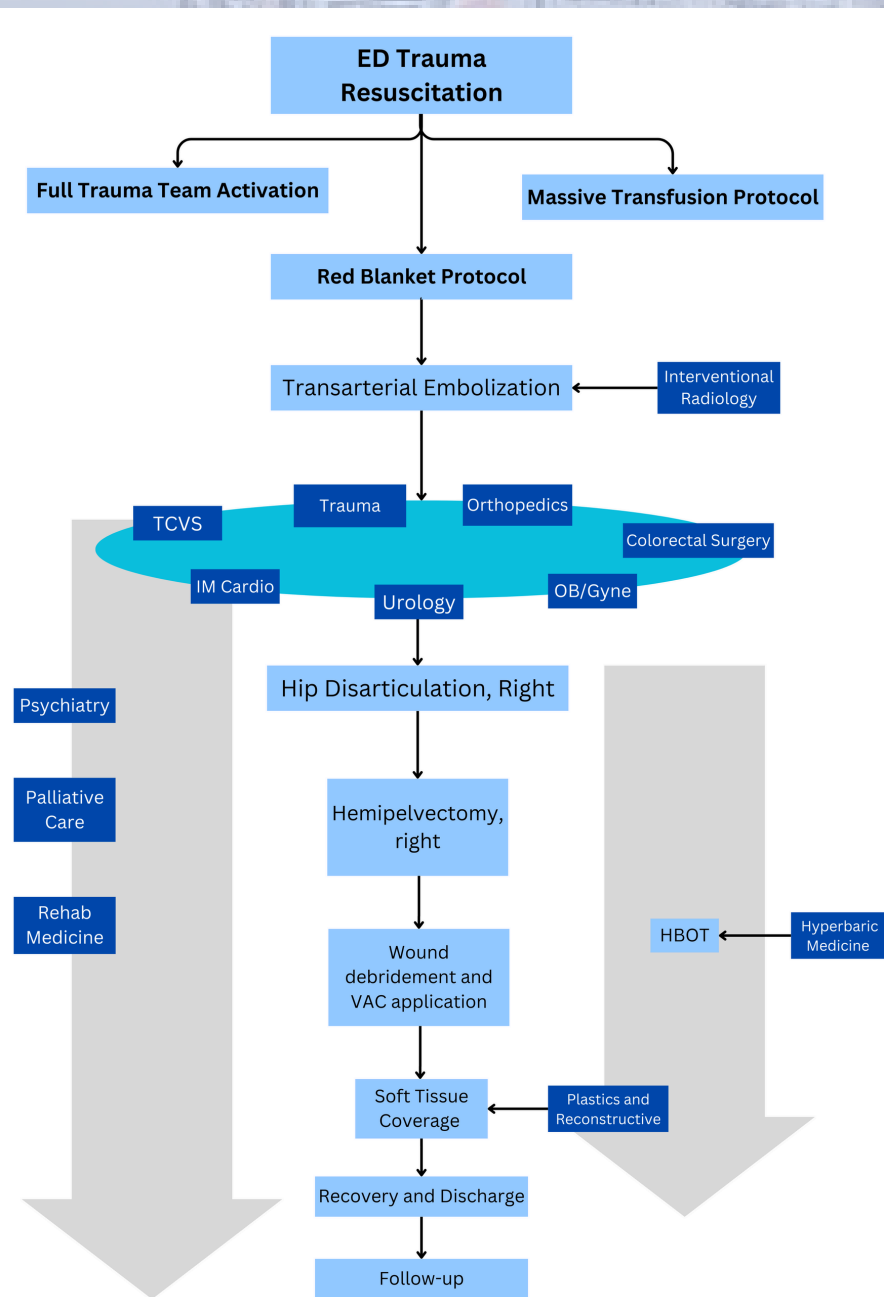


Fig. 1 - Timeline Management from initial ED resuscitation to discharge and follow-up care



REFERENCE

CONTACT INFORMATION

