

**PP045 LEAKING PIPE:  
COMPENSATED DENGUE  
SHOCK IN PLASMA LEAKAGE**

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**INTRODUCTION**

During the course of dengue illness, acute increase in blood vessels permeability, causes leakage of plasma into extravascular compartment, resulting in shock and haemoconcentration. Adequate fluid management is essential to prevent patient's deterioration.

**CASE REPORT**

46 years old Malay lady, with no co-morbid presented to Emergency department for fever for 5 days, abdominal discomfort and feeling lethargic for 2 days. Patient had history of dengue fever 15 years ago and she stays in dengue prone area. In the initial phase of resuscitation, patient was given 10cc/kg/hour normal saline. Bedside ultrasound scan showed good left ventricular systolic function, left ventricular hypertrophy seen with no pericardial effusion. The inferior vena cava (IVC) was collapsible and flat and free fluids seen at Morrison's pouch with a distended gall bladder. She was treated as severe dengue in critical phase with plasma leakage. Patient's haematocrit maintained at 53% despite given 10cc/kg/hour of normal saline. A repeated bedside ultrasound scan showed the Velocity Time Integral (LVOT VTI) was 17.4cm, with IVC diameter of 0.24cm. Subsequently, patient's pulse volume became weaker, with cold peripheries and her capillary refill time was more than 3 seconds, revised diagnosis was severe dengue in critical phase in compensated shock, with plasma leakage. Her venous blood gas (VBG) also showed worsening metabolic acidosis. After total bolus of 27 cc / kg / hour of fluid resuscitation, patient remained in compensated shock with poor urine output. Repeated

bedside ultrasound scan show worsening plasma leakage seen in the lung and abdomen, IVC remain collapsed with good cardiac contractility. Patient was given another bolus of fluid 10cc/kg/hour of Gelafundin, a 5cc/kg/hour of normal saline, and also 250mls of IV human albumin 25%. Patient was started on Non-Invasive Ventilation to support the work of breathing. With close monitoring and constant reassessment of the patient, along with ultrasound guidance, patient's condition improved and was subsequently admitted to GICU for further observation.

**DISCUSSION**

There is an increased risk of severe dengue in patient who is second time infected as demonstrated in this patient. Innate immune system, cellular and humoral immune system are implicated in pathogenesis of severe dengue in secondary infected patient. Upon recognizing this, patient was observed closely with clinical parameters and the aid of bedside ultrasound. Fluid administration guided by the fluid responsiveness and fluid tolerance. Plasma leakage should not be a hinder for adequate fluid resuscitation.

**CONCLUSION**

Severe Dengue with plasma leakage requires close monitoring of different clinical, biochemical and ultrasound parameter to ensure best outcome for this group of patients. Early recognition and constant reassessment are the key for a successful fluid management in dengue fever with plasma leakage.