

## Editorial

# Inferior Vena Cava Index in Critical Patient of Emergency Department

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Patients presenting to the emergency are patients that with changes in consciousness and Orientation refer weakness and is in ILL clinical trials have Tachycardia, tachycardia alarms, decreased blood pressure and decreased urine output, dry mucous membranes and dehydration [1].

And doctors are not able to communicate effectively with their relatives, and have different consciousness and are not quite oriented. And of the vital signs was tachycardia and have decreased blood pressure and in study of urinary output have less than 0.5cc/kg/min.

They typically enter in the field of diagnosis and treatment of shock and quickly are in need of regeneration and hydration so as not to entering a vicious cycle and not MODS [1].

These patients can start doing hydration with urinary output control or in some patients, administration of P/C's. But to achieve an accurate and reliable control of the hydration is status of the CVP.

Doctors around the world seek to find an on invasive method to assess hydration status of patient. Several studies have been done in this field.

Among the masultrasonic methods, pointed out that the development of a portable means of access to appropriate training in emergency bed side ultrasound and sonography can be done. Based on this study to investigate the relationship between the diameter and length of the central vessel including the IVC and IJV and its relationship with the CVP and the clinical status of patients who are in a state of shock is located. In a study published in 2010 as Prospective IVC diameter as a marker for the diagnosis of shock Homologic been investigated [2-6].

To achieve the study goal, the studies which IVC diameter was measured by USG and the patient's spontaneous breath in gland status of volume off laid has been reported in the study. Totally five studies in four different countries in which 3 of them were about case control and the rest were about be for and after have been investigated. The

results of this study indicate that the IVC diameter in hypovolemic ones been lower than those specifically hypovolemic (CI: 95%).

Prospective and cross sectional study within 19 months in patients in US and IVC and CVP relationship has been measured. In this study the importance of access to CVP as a crucial physiological data for anon invasive preload is necessary [7-10].

In this study, the hemodynamic significance of ultrasonography in these cases has mentioned.

Providing catheter to measure the CVP time-consuming a disassociated with significant side effects and the importance of CVP is well-established and EGCT very key findings.

Based on this study, a strong correlation between IVC diameter and CVP compared between the two methods both have poor correlation with CVP. According to several studies mentioned in this field non invasive method to measure CVP is still a firm conclusion has not been reached in this regard. Since measuring IVC diameter and other parameters related to the patient's condition (due to the high fat or high intestinal gas) could affect the ED is not feasible. We decided jugular vein diameter in critical patients presenting to the emergency which requires the insertion of catheters CVC to fluid resuscitation with CVP direct control measure and to examine its relationship with CVP [11].

Hemodynamically unstable patients presenting to the emergency department and review clinical signs such as blood pressure and reduced state of consciousness, we note that they are commonly as shock enter to the emergency department and follow the diagnostic and therapeutic are administrated. Revive and rapid hydration helps to prevent the risk critical factors for these patients. Mentioned case has high managing importance and selecting a precise and reliable method to achieve hydration status is required. Invasive methods to determine hydration status of patients with conditions such as is CUP. Today, doctors and specialists are very interested to use non-invasive methods such as the use of portable devices at the bed side ultrasonography can be seen in recent researches. In recent studies examining the relationship between the diameter and length of the central artery including IJV and IVC and the patient's clinical status has been in a state of shock and IVC as an important factor in the diagnosis of hemorrhagic shock is introduced. In our study of 78 critically ill patients due to the need to assess the need for fluid resuscitation have central venous pressure and the jugular vein diameter and the diameter of the inferior vena cava was also measured that results with numbers from CVP line were evaluated [12].

The mean diameter of the inferior vena cava  $55/16 \pm 32/63$  at baseline to  $56/18 \pm 97/57$  decreased during resuscitation. Jugular diameters at baseline were  $62/16 \pm 21/27$  to  $11/15 \pm 37/25$  fell during resuscitation. Jugular vein between the inferior vena cavadiameter was observed ( $P = 0/001$ ).

Between the inferior vena cavadiameter and standard CVP was significant difference ( $P > 0/001$ ).

In the prospective study by Akille and colleagues reported in 2010 IVC as a marker in the diagnosis of hemorrhagic shock was introduced. In this study we evaluated serum electrolytes IVC diameter [13].

In a study by LYON significant difference between IVC diameters was reported during respiration following this study, IVC diameter measurement is a better predictor ultrasound to the shock INDEX. In our study, the results showed a decrease in IVC diameter is in the process of recovery and hydration. That is same as the results of other similar studies [14].

In the study of traumatic hemorrhagic shock by Kauvar and colleagues on the management concluded that CVP catheter has been to measure time with great effects. Ultrasound was used in this study based on the results of this study IVC diameter less than 2cm with good reliability CVP less than 10 estimates [15].

## Conclusion

Significant correlation between the reduction in the diameter of the inferior vena cava and CVP line was obtained which can be expected to reduce the diameter of the fluid in patients to the emergency room as a non-invasive method used.

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