

**FAST (Focused Assessment with Sonography in Trauma) findings before and after serum therapy in blunt abdominal trauma patients**

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**Background:**

Trauma is the first cause of youth mortality in developing countries. Focused Assessment Sonography for Trauma (FAST) has been shown to be a reliable tool for examining the trauma patients. Hence, the purpose of this study was to compare the FAST findings before and after serum therapy.



**Patients & Methods :**

This descriptive-analytical study was performed on 200 trauma patients, who randomly entered the study. Inclusion criteria were the patients with normal FAST, and stable vital signs and exclusion criteria were positive FAST findings, penetrating abdominal trauma and unstable vital signs. The trauma patients, underwent sonography at the baseline and four hours after serum therapy.

**Data collection:**

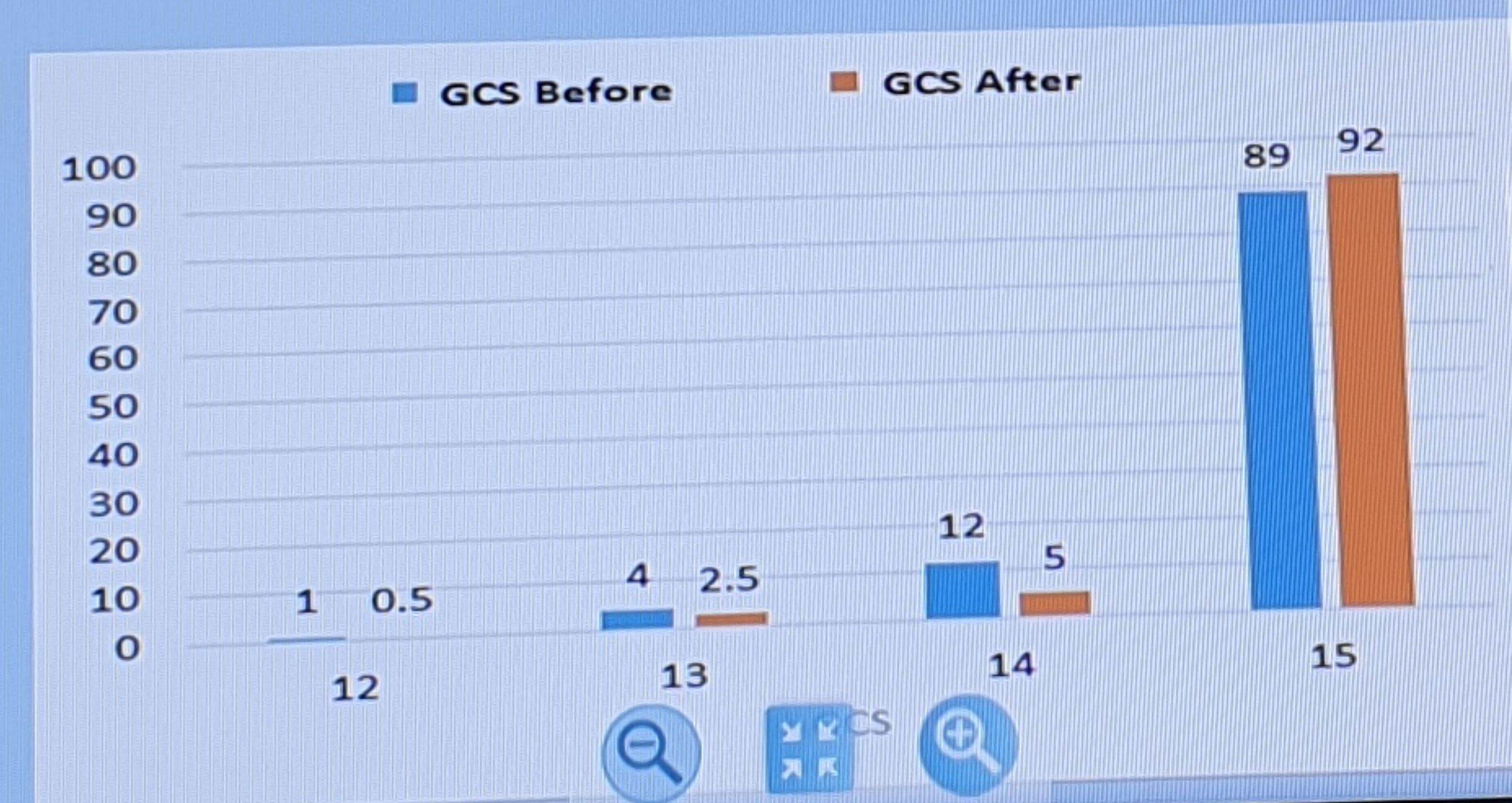
Data were analyzed using descriptive (mean and percentage) and inferential (Wilcoxon) statistics.

**Results & discussion :**

The mean age of patients participating in the study group was  $33.47 \pm 15.85$  years, including 86.5% male and 13.5% female. The results showed that the serum therapy could significantly increase oxygen saturation, diastolic blood pressure and level of consciousness ( $P=0.001$ ). Respiratory rate, pulse rate, and systolic blood pressure were reduced, and the number of FAST-based suspicious diagnoses were also decreased ( $P=0.001$ ).

		Normal FAST	Suspicious FAST	Free fluid in FAST	P-value
		Number (percent)	Number (percent)	Number (percent)	
FAST findings	Before serum therapy	188 (94)	12 (6)	0 (0)	0.001
	After serum therapy	200 (100)	0 (0)	0 (0)	

Figure 1: Comparison of the level of consciousness (GCS) before and after serum therapy



**Conclusion & perspectives :**

The results of our study showed that the serum therapy in the patients with blunt abdominal trauma could improve blood oxygen saturation, decrease systolic blood pressure, increase diastolic blood pressure, increase the level of consciousness, and decrease tachypnea and pulse rate after four hours of patient administration in the emergency department. Our most important finding was that the serum therapy reduced the number of suspected cases in the FAST examination and increased the diagnostic accuracy of this imaging technique alone. However, the CT scans need to be used to determine the precise accuracy.

**Acknowledgement :** Our study demonstrated that the serum therapy reduces suspected cases in the FAST examination.