SUMMARY

The intensive care unit is an expensive treatment facility where critical patients with high mortality rates are treated. Estimation of disease severity and probability of death are important elements in determining the prognosis of patients in PICU. Such prognostic predictors need to be informed to the parents clearly to explain the objectives of treatment and to involve them in decision making process. Imperfections in informing prognosis will lead to inconvenience and uncomfortable situations for the patient's family.

A more accurate prognostic assessment can lead to more appropriate monitoring, management, and family counseling. An objective and rational method to determine and estimate the severity of illness is by using a probability model which can predict mortality risks. For this reason, a scoring system is necessary to be developed. Currently, scoring systems have been developed to estimate the probability of hospital mortality for intensive care unit (ICU) patients. These scoring systems, which can predict mortality or multiple organ dysfunction syndrome (MODS) outcomes, are available for both adults and children. Three MODS scores have been validated for adult patients, but only one MODS score for children, i.e, the pediatric logistic organ dysfunction (PELOD) scoring system.

- In the present cross- sectional study, our aims was the comparison of efficiency of different PICUS using the PELOD score.
- To achieve this target, we prospectively studied a series of 100 consecutive patients admitted to Benha University Hospital PICU in comparison with 100 consecutive patients admitted to Benha Children Hospital PICU.
- PELOD scoring system was applied to each PICU to predict patient's out come.

• Results revealed the following:

- There is high significant difference between both study groups regarding the mean age, length of stay, PELOD score and percentage of probability of death.
- There is high significant difference between both study groups among survivors and non survivors according to probability of death .
- There is high significant difference between both study groups regarding the mean PELOD score and mean probability of death according to out come among survivors and non survivors.
- The study also shows direct proportion between number of non survivors and probability of death in both PICUS.
- There is direct proportion between PELOD score and mortality rate.

- The high sensitivity and specificity of PELOD score showed in this study in Benha University Hospital PICU and Benha Children Hospital PICU demonstrate that PELOD score is a good method to predict the mortality in PICUS.