



## الملخص الإنجليزي للأبحاث المقدمة من

الدكتور ه / ساره ابراهيم ابوالنور مدرس طب الأطفال كلية الطب جامعة الفيوم الى  
اللجنة العلمية الدائمة لطب الأطفال للحصول على اللقب العلمي لوظيفة أستاذ مساعد



كلية الطب – جامعة الفيوم  
قسم الأطفال

### البحث الثامن

(بحث مشترك منشور دوليا مشتق من رسالة علمية)

#### عنوان البحث :

التأثير السريري وفعالية تخطيط صدى القلب بجانب السرير على إدارة المرضى في وحدة العناية المركزة للأطفال:  
دراسة مركزية واحدة

**Clinical impact and efficacy of bedside echocardiography on patient management in  
pediatric intensive care unit: A Single Center Study**

المشاركين في البحث :

د. محمد عزت الغواص\* - ط. احمد معروف\* - د. سارة ابراهيم ابوالنور\*  
\* قسم طب الأطفال – جامعة الفيوم

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**Background:** Critically ill pediatric patients often have multi-system involvement that can overlap different clinical diagnoses, making proper assessment and management challenging. However, using echocardiography is increasing as a bedside and noninvasive tool for accurate hemodynamic assessment and guiding treatment.

**Objectives:** This study aimed to determine the indication and value of bedside echocardiography in patient management in the pediatric intensive care unit (PICU) at Fayoum University Hospital and its relationship to the Pediatric Risk of Mortality Score III (PRISM).

**Methods:** A total of 200 critically ill pediatric patients admitted to the PICUs of Fayoum University Hospital between January 2020 and January 2021 were prospectively evaluated. Detailed clinical examinations and requested echocardiography were conducted by intensivists and cardiologists.

**Results:** 200 critically ill pediatric patients had an age range of 0.2–12 years, with 134 patients (67%) under two years old. The most common admission diagnosis was pulmonary disease in 51 patients (26%), followed by cardiac disease in 44 (22%). The most common indication for echocardiography was left ventricle function assessment in 68 patients (34%). Among the 108 patients (54%) who underwent echocardiographic assessment, no difference in the management was found, while in the remaining 92 patients (46%), supplemental information or decision help in management was obtained. There was a positive correlation between the effective value of echocardiography in the management of patients with primary cardiac disease (p-value = 0.001), shock (p-value = 0.001), and hypoxia (p-value = 0.009). Additionally, there was no correlation between the PRISM score and the effectiveness of echocardiographic assessment.

**Conclusion:** The most common clinical indication for bedside echocardiography is assessing cardiac function. Echocardiography is an effective tool in PICU patient management, particularly in cases with primary cardiac disease, hypoxia, and shock, but its effectiveness does not increase according to the severity of the disease.

عميد كلية الطب

رئيس القسم

أ.د/حمدي محمد ابراهيم

أ.د / احمد محمود عبد المقتدر