

**POST-OPERATIVE ANALGESIA IN PAEDIATRIC UROLOGY PATIENT- NEED OF  
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**ABSTRACT**

Inadequate postoperative pain management leads to a high rate of morbidity and mortality. In the current situation, adequate pain management in patients of paediatric age group upon whom urological procedures are performed is not standardised. The aim of this research was to determine the degree of successful postoperative pain management in children using the Visual Analogue Scale (VAS). It was a two-year cross-sectional analysis. A total of 90 people were included in the study, with an average age of 8.7 years admitted for elective urological procedures. Patients were chosen from GMC Srinagar, GMC Jammu and ASCOMS Jammu. This research involved children aged five to twelve who were getting postoperative analgesics. They were all psychologically sound, attentive, and cooperative. Patients were chosen such that they did not have any malignant condition or debilitating pain or postoperative pain related to surgical wound sepsis. From the first postoperative day to the seventh postoperative day, postoperative pain was assessed by VAS and rated using Sriwatanakul's system. It was discovered that the differences in pain scores between the three institutes were statistically non-significant from the first postoperative day to the seventh postoperative day. Up until the third postoperative day, patients experienced moderate pain, minimal pain until the fifth postoperative day, and some pain until the seventh postoperative day. In these hospitals' paediatric surgery wards, new analgesics could not successfully manage postoperative suffering. To determine the degree of successful postoperative pain management in infants, a larger study with a large number of patients in various Bangladeshi centres should be conducted.

**KEYWORDS:** Analgesia; paediatric urology, pain measurement; surgery.**INTRODUCTION**

Postoperative pain is a distressing physical and emotional sensation caused by tissue trauma that has occurred or may occur. Not only is postoperative pain causing human discomfort, however there is compelling evidence that untreated postoperative pain may have adverse physiological and psychological consequences, contributing to substantial morbidity and even mortality.<sup>[1]</sup>

In association with successful treatment of Postoperative pain, evidence of shorter hospital stays and improved patient satisfaction has been published.<sup>[2]</sup> Such a premise necessitates the timely and efficient management of pain in children during the post-operative phase.

**Pain assessment is critical**

a) To assess pain severity, consistency, and duration, and

b) To aid in therapy selection.<sup>[3]</sup>

Efficient pain management is not standardised in the current procedure in paediatric surgery units. As a result, this research used the Visual Analogue Scale to determine the degree of successful postoperative pain management in infants.

**MATERIALS AND METHOD**

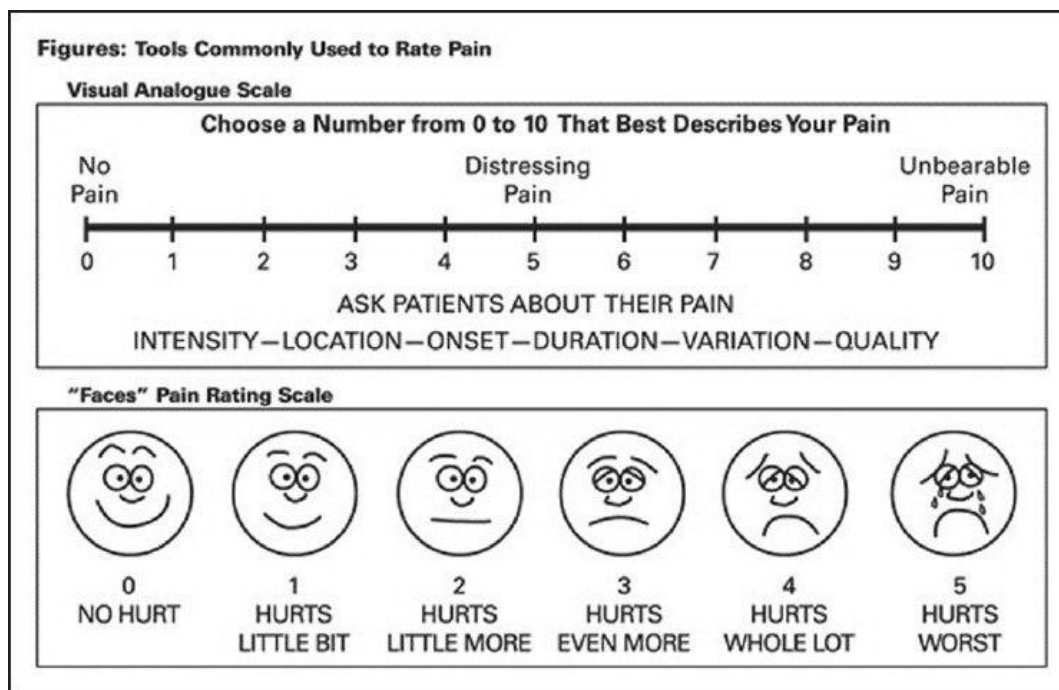
From July 2016 to June 2018, a cross-sectional analysis was conducted. In this report, ninety admitted patients (30 from each hospital) with an average age of 8.7 years from the department of paediatric surgery who underwent major elective surgery were included.

**Table 1: Mean value of pain score (VAS in mm) from first to seventh postoperative day (POD).**

POD	A {GMC Srinagar} Mean $\pm$ SD	B {GMC Jammu} Mean $\pm$ SD	C {ASCOMS Jammu} Mean $\pm$ SD	P Value
POD 1	58.67 $\pm$ 3.42	59.17 $\pm$ 3.56	59.83 $\pm$ 2.86	A vs B: $p > .10$ B Vs C: $p > .50$ A Vs C: $p > .50$
POD2	46.00 $\pm$ 6.88	44.33 $\pm$ 5.98	45.00 $\pm$ 5.98	A vs B: $p > .10$ B Vs C: $p > .10$ A Vs C: $p > .10$
POD3	35.00 $\pm$ 1.25	36.83 $\pm$ 1.48	35.67 $\pm$ 1.00	A vs B: $p > .05$ B Vs C: $p > .50$ A Vs C: $p > .50$
POD4	30.00 $\pm$ 1.00	29.20 $\pm$ 1.56	30.67 $\pm$ 1.50	A vs B: $p > .10$ B Vs C: $p > .50$ A Vs C: $p > .50$
POD5	25.17 $\pm$ 3.86	25.67 $\pm$ 3.48	25.50 $\pm$ 4.01	A vs B: $p > .50$ B Vs C: $p > .05$ A Vs C: $p > .50$
POD6	19.33 $\pm$ 1.02	19.00 $\pm$ 1.33	18.17 $\pm$ 1.06	A vs B: $p > .10$ B Vs C: $p > .50$ A Vs C: $p > .50$
POD7	17.67 $\pm$ 2.17	17.33 $\pm$ 1.85	16.67 $\pm$ 1.54	A vs B: $p > .10$ B Vs C: $p > .05$ A Vs C: $p > .05$

This research involved children who had received postoperative analgesics. Patients were chosen based on their lack of malignancy, as well as chronic pain or postoperative pain attributed to surgical wound sepsis.

From the first to the seventh postoperative day, pain was assessed using the Visual Analogue Scale (VAS). Different levels of skin pinching were used to describe different levels of discomfort to the patients.<sup>[4]</sup>



This study involved mentally stable, well-responsive, and cooperative patients who could reliably mark pain scores on the VAS. Postoperative pain score was measured and graded into various categories based on the severity:

1) Little pain = (13.9  $\pm$  6.4)

2) Some pain = (19.0  $\pm$  10.2)

3) Mild pain = (19.6  $\pm$  10.4)

4) Moderate pain = (42.8  $\pm$  10.7)

5) Severe pain = (82.9  $\pm$  9.6)

6) Agonising pain = (91.2  $\pm$  8.0)<sup>5</sup>

On the first postoperative day, effective postoperative pain management was described as a pain score of less than 13 mm on the VAS.<sup>[6,7]</sup>

ANOVA was used for statistical research.

## RESULTS

This research included a total of 90 admitted patients who underwent major elective surgery. The average age of the participants in the sample was 8.7 years (range: 5-12 years).

**Table 2: Mean value of pain score (VAS in mm) and their pain grading in different postoperative days (POD).**

POD	A {GMC Srinagar} Pain score mean $\pm$ SD	B {GMC Jammu} Pain score mean $\pm$ SD	C {ASCOMS Jammu} Pain score mean $\pm$ SD	Pain Grading
POD 1	58.67 $\pm$ 3.42	59.17 $\pm$ 3.56	59.83 $\pm$ 2.86	Moderate
POD2	46.00 $\pm$ 6.88	44.33 $\pm$ 5.98	45.00 $\pm$ 5.98	Moderate
POD3	35.00 $\pm$ 1.25	36.83 $\pm$ 1.48	35.67 $\pm$ 1.00	Moderate
POD4	30.00 $\pm$ 1.00	29.20 $\pm$ 1.56	30.67 $\pm$ 1.50	Mild
POD5	25.17 $\pm$ 3.86	25.67 $\pm$ 3.48	25.50 $\pm$ 4.01	Mild
POD6	19.33 $\pm$ 1.02	19.00 $\pm$ 1.33	18.17 $\pm$ 1.06	Some
POD7	17.67 $\pm$ 2.17	17.33 $\pm$ 1.85	16.67 $\pm$ 1.54	Some

Up until the third postoperative day, patients experienced moderate pain, minimal pain until the fifth postoperative day, and some pain until the seventh postoperative day.

## DISCUSSION

As pain was assessed, the disparity in perceived pain scores between the three institutions was statistically non-significant ( $p > .10$ ,  $p > .50$ ,  $p > .05$ ) from the first to the seventh postoperative day. The mean pain ratings on the first postoperative day were  $58.67 \pm 3.42$  (BSMMU),  $59.17 \pm 3.56$  (BICH & DSH), and  $59.22 \pm 2.87$  (BICH & DSH) (DMCH). The study's pain ratings specifically showed that postoperative pain in these three centres could not be successfully managed with current analgesic practise.

Up until the third postoperative day, patients experienced moderate pain, minimal pain until the fifth postoperative day, and some pain until the seventh postoperative day. This result is consistent with Thomas's conclusion that pain management was mild after the second postoperative day.<sup>[8]</sup>

The three paediatric surgery departments of these hospitals found that current analgesics could not properly manage postoperative pain. As a result, further research is needed to determine the extent of successful postoperative pain management in infants.

## CONCLUSION

Post-operative analgesia is of great importance especially when it comes to paediatric age group patients. VAS is being Post-operative used successfully to grade and see the results of analgesia. Despite all the current management protocol, there still is a void which needs to be filled and further research is warranted for a better understanding of the phenomena and eventually better management of such patients.

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