BACKGROUND

Many pediatric patients presenting to the Emergency Room (ER) will present with either chronic or acute pain. Unfortunately, those who do not present with pain will often undergo a painful procedure while in the ER (Hatfield et al, 2006). Discussion follows on correct use of pain scales, procedures, and Evidenced Based Practice for preventing or alleviating pain.

OBJECTIVES

1. To identify the most frequent painful procedures performed in Pediatric Hospitals.
2. Review some age-appropriate pain scales.
3. Discuss Evidence Based Practice for decreasing pain and stress during identified procedures.

PROCEDURES

Commonly performed procedures include:

- Placement of Nasogastric Tubes (NG Tubes)
- Insertion of an Intravenous Catheter (IV)
- Insertion of a Urinary Catheter
- Suturing

PAIN SCALES

FLACC (Face, Legs, Activity, Cry, and Consolability) Scale, is the most widely used behavioral and observational scale for non-verbal children and infants (Creflin et al, 2015).

Wong-Baker Faces Scale, can be used for children as young as the age of 3 for self-reporting of pain (Bishop-Kurulo, 2002).

OPTIONS FOR PAIN PREVENTION

Nasogastric Tube Placement:

Of all painful procedures performed in the ER, Nasogastric (NG) tube placement has been identified as the most painful. Unfortunately, pain management for this procedure remains poor. Research has shown that the use of topical lidocaine, prior to insertion, decreases pain and does not cause unwanted side effects. The lidocaine can be administered in jelly form, atomized, or nebulized. The dosage is weight based and should not be used in patients under 4 kilograms (Bruene et al, 2015).

Suture Placement:

The pain associated with lacerations is upsetting enough without the added stressor of a needle stick. Laceration repair can be performed without the injection of lidocaine by using a topical anesthetic. The anesthetic should contain a local anesthetic and a vasoconstrictor. The preparation (either liquid or gel) takes 20 to 30 minutes to be fully effective and cannot be applied to digits or genitals.

In an emergent situation, the laceration can be repaired with lidocaine alone. To decrease the pain, the lidocaine can be warmed, buffered with bicarbonate, or injected slowly with a small gauge needle (Hatfield et al, 2006).

Intravenous Catheter Placement:

Among the painful procedures discussed, intravenous catheter placement is often the most feared. Children and parents alike demonstrate anxiety and fear prior to these procedures (Wolyniez et al, 2013).

Distraction is a cognitive psychological technique that is used by healthcare professionals. A growing trend in this area is the use of a medical clown. Wolyniez and colleagues performed a small randomized control trial on 47 children. The children, ages 3-7, who had a medical clown present had a significant reduction on the pain scale. Another form of distraction is the use of music during painful procedures. Music in the emergency department has mixed reviews, but has shown to decrease parents anxiety levels while their children have an IV placed (Hartling et al, 2013).

EMLA is a lidocaine jelly that can be used to numb the top layer of the skin, and its use on pediatric patients is well documented. EMLA does have limitations in a pediatric emergency setting due to the required 45 min activation time (Vlessides, 2005).

Many hospitals have begun to use needle-free injection systems that solve the time issue. These products use carbon dioxide to jet inject lidocaine into the top layer of the skin prior to IV placement. More studies are needed, but in one small study, on a product called the J-tip, there has been promising results. Fifty-four percent of the patients showed absolutely no pain with IV placement versus nineteen percent with the use of EMLA (Vlessides, 2005).

Urinary Catheter Placement:

Contamination rates for urine specimen collection vary greatly by the way in which it is collected. Urine bags have the highest contamination rate, then clean catch collection, and finally catheter specimen collection (Tosif et al, 2011).

Clean catch urine is less traumatizing than catheter specimen collection, and should be the goal, but is not always possible in the non-potty-trained child (Loane, 2005).

RESULTS AND CONCLUSIONS

There are many painful procedures that may be required when a child enters the emergency room. Nurses and physicians are responsible for staying up to date on the best evidence based pain reduction practices. Decreasing the pain and anxiety that can be caused should remain a goal, especially for our littlest patients.

Pain management, prior to a potentially painful procedure, should be a priority to provide the best care for the pediatric population and their families.

REFERENCES

References available upon request.

CONTACT

Elizabeth Swaim BSN, RN
swaimea1@covhs.org
Laura Valdez MSN, RN
valdezl3@covhs.org